Manitoba Medical Review

Vol. 30 **OCTOBER, 1950** **No. 8**

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The Manitoba Medical Review

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MEDICINE

Recent Advances in Medicine

This is the first of a series of articles on Recent Advances in Medicine. Only the youngest members of the profession are unaware of the vast strides which have been made in the past two decades. Those who have been in practice for twenty-five or thirty years marvel at the wealth of knowledge that has been acquired since they graduated. Compared with what they have today their original equipment seems almost medieval. Subjects which then received little or no mention in the curriculum now are major topics. The barbiturates, the sulphas, the antihistamines, the antibiotics have like modern weapons of war, replaced the bows and flintlocks used a generation ago.

But not only has therapeutics undergone a revolution. There is now a changing concept of disease. In the past war battles were not distinguished by the names of towns and villages but by the names of countries and continents. Similarly disease processes are now not spoken or thought of as afflictions of single organ or tissue but in terms of the whole.

"No man is an Iland intire of itself" nor is any organ isolated from others, but just as "Every man is a peece of the Continent; a part of the Maine," so is it with bodily organs, structures and tissues. And with minds, also, and temperaments and personalities and constitutions. The doors for which, so far, we have had no key, are being opened. Imagination and industry are thinning the veil that has for so long obscured our vision. Never since the Renaissance has so much been added to our ken in so short a time. But this is not a Renaissance, not a new birth, it is rather a coming of age with the wonders of the future presaged so clearly that none will be surprised by their number or magnitude.

J. C. H.

Recent Advances in Internal Medicine

S. Vaisrub, M.D., M.R.C.P. (Lond.)

The shopworn, yet catchy title of this review has implications that are somewhat misleading. "Advances" reads very much like a war communique, released by the headquarters of a victorious army. It implies that there were no retreats and no setbacks. Subsequent events, however, not infrequently prove that a supposed advance was in reality a tactical and strategic error, more in the nature of a retreat. A reviewer of medical progress would, thus, do well to remember that the hopes of today may be tomorrow's frustrations. Nor is the qualifying adjective "recent" conducive to precision and accuracy. It is much too relative, and elastic, conveying different connotations to different people. To a young enthusiast, habituated to voracious reading of the latest publications, "recency" may imply weeks or months. To a sedate, mature "philosophically" inclined mind, it may spell the span of a decade. In either case, there is a strong temptation to label anything that has been written during the period under consideration as recent, new, and revolutionary, whereas it often is a repetition or modification of earlier thought.

The above deficiencies in precision and accuracy of the title, however, are offset by its convenience. Its very elasticity permits more freedom of manoeuvre, leaving, as it does, a great deal to the discretion of the reviewer.

In the present review emphasis will be placed on general concepts and trends in medical thought, rather than on advances in any particular field. The subjects will be dealt with under their appropriate headings.

Syndrome and Disease

The dethronement of "Disease" and its substitution by "Syndrome" took place gradually almost imperceptibly. Its significance, nonetheless, must not be overlooked, for it represents a major departure in medical thought. The concept of disease, the accepted unit of ill health throughout the centuries, implies a specific cause, which is its essential prerequisite. A syndrome, on the other hand, may arise from many different causes. It has its philosophical basis, as stated by Himsworth, "not in specific disease factors, but in a chain of physiological processes, interference with which at any point produces the same impairment of bodily function."

An excellent illustration of the method of application of this concept to individual conditions, as exemplified in Diabetes Mellitus, has been given by the above author in his 1950 Sharpey Oliver Lecture. In it, having defined diabetes as a syndrome characterized by hyperglycemia, and, having outlined the complex system of metabolic,

enzymatic, and endocrine processes involved, he proceeds to point out how interference with this system at any point may cause the syndrome. He groups the causes of diabetes into two broad classes (a) those in which the primary fault is that of interference with some stage in the direct line of carbohydrate metabolism, whether due to primary insulin deficiency or its inhibition by other factors, and (b) those in which the disturbance is that of storage of carbohydrate as fat. The first group has its clinical counterpart in the juvenile, labile, insulin sensitive diabetic, the second in the obese, middle aged or old, insulin insensitive patient, who responds well to weight reduction. Diabetes, thus, cannot be considered a disease with a single cause, but rather a syndrome with multiple etiologies.

The list of syndromes is now impressively long. It contains some of the rarities of medicine as well as many common conditions. It will continue to expand as our knowledge increases. There is little doubt that the rise of the concept of syndrome, hailed in some quarters as a "liberation of medical thought from the tyranny of old rigid ideas," is an important recent advance.

Adaptation Syndrome and Diseases of Adaptation

The current rise to prominence of the concept of the Adaptation Syndrome and the Diseases of Adaptation is due, in no small measure, to the indirect support that it has received from the discovery by the Mayo Clinic team of the action of ACTH and cortisone on Rheumatoid Arthritis. This momentous discovery has helped to raise the, hitherto coldly received, hypothesis to the rank of a fashionable, much discussed, and widely accepted theory. The theory is based on the conception that the basic reaction to stress as such is common to all organisms. It maintains that, in addition to the well known phenomena of specific damage and specific defence (antitoxins, antibodies, etc.), there are those of non-specific damage and non-specific defence. This response of the body to stress as such constitutes the General Adaptation syndrome. Stress may vary from physical injury to emotional upset, and may include such diverse conditions as burns, exposure to cold, fasting, poisons, infections and mental strain. The basic response, however, representing the closely interwoven manifestations of both non-specific damage and non-specific defence, is the same. It develops chronologically in three stages: (1) The alarm reaction. (2) The stage of resistance, and (3) The stage of exhaustion. The first stage, the alarm reaction, has two phases: (a) The phase of shock in which the changes represent the non-specific systemic damage effected by the stress producing agent (hemoconcentration, increased cellular permeability, hypotension, hypothermia, the clinical picture of shock), and (b) the phase of counter shock, in which the symptoms and signs of shock tend to be reversed, as systemic defence comes into play. The second stage, stage of resistance, is essentially a continuation of counter shock. In it, the resistance is increased to the acting stress but decreased to other types of stress producing agents. The third stage, stage of exhaustion, resembles that of shock and heralds death.

The pathways through which the above complex systemic reactions are elicited, are nervous and hormonal. The nervous defence reactions are mainly regulated by the hypothalamus. From here autonomic nerves carry impulses throughout the body to the vascular system and the glands. The posterior pituitary is stimulated by the way of the pituitary stalk to secrete vasopressin. The adrenal medulla is stimulated via the splanchnics to secrete its hormones. Much more important, however, than the nervous responses, are the hormonal defence reactions. The latter are effected mainly through the anterior pituitary, which, during stress, secretes increased amounts of adrenocorticotrophic hormone (ACTH). This hormone stimulates the adrenal cortex to secrete excessive amounts of glucocorticoids (cortisone, compound F) which increase resistance to stress by their numerous systemic actions. Among the latter may be listed effects on metabolism (gluconeogenesis, hypokalemia, etc.) hemopoietic system (lymphopenia), cell permeability, phagocytosis, not to mention other lesser known effects on fibrous tissue, kidneys and other organs.

The above hormonal and nervous defence mechanisms elicited in response to stress, and the non-specific damage produced by the latter, constitute the general adaptation syndrome. The syndrome, however, according to Selye, does not occur in its pure form. It is modified by "conditioning" factors, e.g., direct specific damaging effects of stressors, or some unrelated factors of heredity, previous state of health, diet, etc. These "conditioning" factors have an important bearing on the subject of Diseases of Adaptation.

The complex mechanism, described above, may be deranged by excessive or unbalanced adaptive efforts. Of the latter the most important is the dysequilibrium between gluco-corticoid and mineralo corticoid hormones of the adrenal cortex. These hormones are in many respects antagonistic to each other. Injection of a mineralo-corticoid (desoxysterone acetate) in a rat produced under certain experimental conditions, definite pathological lesions. It is Selye's view that similarly in the human, under natural conditions, excess of mineralo-corticoids not counterbalanced by glucocorticoids may result in a variety of important diseases, which would be best named—Diseases of Adaptation. These diseases are numerous, and though seemingly unrelated are produced by the

same mechanism, their polymorphism being due to "conditioning" factors.

Diseases of Adaptation

(Selye, 1949)

1. Hyperfunctional

(a) Primary diseases of endocrines which participate in the general adaptation syndrome:

1. Cushing's disease (pituitary hyperfunction).
2. Adrenal tumors with "Cushing's syndrome" adrenalcortical hyperfunction).
3. Chromaffinomas (adrenal-medullary hyperfunction).
4. Coarctation of the renal artery and other primary diseases of the kidney conducive to hypertension (renal hyperfunction (hormonal)).

(b) Secondary diseases due to excessive (or abnormal) response of endocrines to stress:

1. Some types of hypertension.
2. Periarteritis nodosa (also arteriosclerosis and other vascular lesions?)
3. Nephrosclerosis.
4. Some types of nephritis (?).
5. Rheumatic disease (?).
6. Waterhouse-Friedrichsen syndrome.
7. Eclampsia (?).
8. Accidental thymus-involution.
9. Some types of tonsillitis (?).
10. Some types of appendicitis (?).
11. Gouty arthritis (?).
12. Some types of diabetes.

2. Hypofunctional

(a) Primary diseases of endocrine which participate in the general adaptation syndrome:

1. Simmonds's disease (pituitary hypofunction).
2. Addison's disease ("status thymicolymphaticus" (?); adrenal-cortical hypofunction).

(b) Secondary diseases due to insufficient response of endocrines to stress:

1. Secondary shock (relative hypocorticoidism (?)).
2. Acute gastro-intestinal erosions ("Curling's ulcer").

The enthusiasm, that the theory is currently evoking, is by no means unanimous. Considerable criticism is levelled against it from various quarters. Some find fault with the language in which the theory in couched, the looseness of its terms, the vagueness of its definitions, and the general lack of clarity. Others attack the concept itself, the experimental evidence on which it is based, and the resulting deductive speculations. Miklejohn points out (a) that Selye's experiments are difficult to duplicate and tend to be taken "as read" by his followers; (b) that there is no direct evidence that mineralo-corticoids may be produced in increased amounts during stress; (c) that the hypothesis has failed to predict the Mayo Clinic experiment. Pickering reminds us (a) that many of the so-called diseases of adaptation occur without history of any demonstrable stress; (b) that many examples of stress are known to occur without resulting disease, and (3) that the listed diseases are too diverse in pathology and incidence to arise from the same mechanism. He warns that "the history of medicine shows how great is the tendency for a tentative and imperfectly documented hypothesis to assume the guise of a so-called fundamental principle."

The criticisms quoted above are only illustrative examples. There are many others. The scope of this review does not permit us to delve deeper into the subject, nor is it intended to weigh the pros and cons, or pass judgment. This theory, which is a bold attempt at creation of a monistic pathology, may or may not survive, but its influence on research investigation and medical thought will be felt for a long time.

Cortisone and ACTH

It may seem incongruous that the names of two therapeutic agents should serve as a heading in a review of theoretical concepts. Yet there is little doubt that their use in this capacity is fully justified, for the discovery in 1949 by Hench and his co-workers of their effects on rheumatoid arthritis, has had greater influence on medical thought than any other discovery within recent memory. It is likened by Pickering to the discovery by Magellan of the Straits that bear his name. "For although the existence of a vast ocean beyond the Americas had been known since the conquistadores crossed the continent, its exploration has been delayed by the absence of any known inlet from the seas of the world."

The discovery of the effects of Cortisone (compound E of Kendall) on rheumatoid arthritis was not an accident, but a result of clinical observation, deductive reasoning, and scientific experiment. Observation by Hench of the beneficial effects of jaundice and pregnancy on rheumatoid arthritis led to the trial of various substances that might possibly be increased in these two conditions, until, when Cortisone became available, the experiment was crowned with success—a triumph for experimental therapeutics. Subsequent trial by various workers of the actions of Cortisone and ACTH in numerous other diseases have demonstrated their possible value in therapy as well as their limitations. Even though a full appraisal of their therapeutic usefulness at this stage would be somewhat premature, it would appear that they offer most promise in the so-called Collagen diseases (Collagenoses), and in some allergic states. They are more valuable in self-limited acute conditions, e.g. rheumatic fever. Their unwanted physiological effects, if used over long periods, limit their usefulness in chronic disease.

The mode of action of these hormones is not known. They do not cure, but suppress symptoms and signs by some unknown mechanism. Hench stressed the fact that the conditions, which respond to these hormones, are those, in which tissue reactions rather than the irritant constitute the disease, and it is these tissue reactions of the host, and not the irritant that are influenced. He likens the disease to a fire, which is not put out by Cortisone, but only suppressed. Nor is the damage, done by fire, repaired by the hormone. Ragan suggests that it may act by decreasing reactivity of connective tissue to trauma of unknown origin. The fact that the disorders benefited are not associated with the usual symptoms of adrenal insufficiency leads Marrian to think that they may be due to an abnormal metabolism of Cortisone rather than to primarily insufficient supply. Selye, in accordance with his concept of causation of the diseases of adaptation by excess of mineralocorticoids over that of gluco-corticoids, believes that ACTH and Cortisone act, the former indirectly, the latter directly, by increasing glucocorticoid effects, thus counter-balancing that of the mineralo-corticoids.

Thus, in addition to their practical therapeutic value these hormones have served as a stimulus to clinical investigation, scientific research in biology, physiology, endocrinology and allied disciplines as well as to speculative deductions. And therein, perhaps, lies the main significance of their action, for a new era has been ushered in for investigation of some obscure reactions of the body. It may be the means by which some light may be shed upon etiology, and pathogenesis of many diseased states. This use of a therapeutic agent in the elucidation of etiology, and pathology is not without precedent. Minot and Murphy have arrived at their concept of the etiology of pernicious anemia through the therapeutic use of liver. Similarly, some of our knowledge of deficiency diseases followed the therapeutic use of the substances in which the body was deficient. The indirect support that Selye's theory of the adaptation syndrome and diseases of adaptation may appear to have derived from the discovery of therapeutic effects of Cortisone, is only one outstanding example of the influence of this discovery on theoretical concepts. Many other speculations as to the relationship between hormones and steroid compounds and chronic disease are "ripe," or in the process of ripening. The promise is great. The impetus given to basic research is tremendous. It is, undoubtedly, a milestone in medical progress and a recent advance of the first magnitude.

(To be Continued)

Infectious Mononucleosis

Paul Green, B.A., M.D.
Deer Lodge Hospital

Infectious mononucleosis is not an uncommon disease. Those who are interested in it find it often, whereas those who have a low index of suspicion see it rarely. This may be due to the lack of awareness that this disease has many facets. The literature is replete with reviews on this subject [1, 2, 3, 42, 43] and we have no good excuse for presenting another. However, we have reviewed 64 cases in adults, and feel that the observations made might be of interest. Like most series this one consisted of patients admitted to hospital and therefore does not include many of the milder cases of this disease. The majority of these cases were males. They were between the ages of 17 and 37 and most were in their 20's.

History

The history of this disease has recently been reviewed by Tidy[4]. Pfeiffer described an epidemic disease in 1889 and named it "glandular fever" after its two most prominent features. He did no blood studies. In 1920 Sprunt of Evans described cases of "infectious mononucleosis" named after the outstanding blood findings. Tidy, in 1921, suggested that glandular fever and infectious mononucleosis were the same disease. These are the two most commonly given names to the disease, although others have occasionally been suggested.

Incidence

It is impossible to know what the true incidence is. As it mainly is a disease of childhood and adolescence and presumably is associated with immunity after one attack, one would assume that it is likely as common as mumps or measles. It is often seen in hospital and laboratory personnel, but this occupational incidence is probably spurious and due to the fact that laboratory examination is more readily available to this group, and hence the diagnosis is made with greater frequency than in the general population.

Geographically the disease is widespread but most cases are reported from the temperate zones.

Seasonally the incidence tends to parallel the incidence of upper respiratory infections and therefore it is mainly seen in spring and fall. Epidemics are rare during the summer months [44, 45] but sporadic cases are not uncommon then. Race: it is said to be uncommon in negroes, but this has been denied[5]. Sex: males are affected more often in the ratio of 3-2. Age: cases have been reported from 7 months to 70 years. In sporadic cases 80%

are between 15 and 30. The disease is uncommon after 40 and if the diagnosis is made in a patient who is past 60 the chances are very great that the diagnosis is wrong.

Occupation: Laboratory and hospital workers have been mentioned. Sturgis[6] found that 50% of student nurses showed presence of the mononucleosis cells in their blood even though many of them did not have symptoms of the disease.

Etiology

The belief has been expressed that infectious mononucleosis is not a disease entity but is merely a type of response to a number of nonspecific infections. No positive evidence has been presented for this belief.

There seems to be universal accord in the belief that it is an infection. However, its infectivity does not seem to be high. It is unusual to see cases appear in a ward where a patient with this disease has been treated. Epidemics, however, do occur.

Various infectious agents have been indicated from time to time. It was suggested that this might be a protozoan infection. Erf had described peculiar protozoid bodies in emulsions of lymph nodes taken from these cases. The nature of these Erf bodies has never been clarified.

In rabbits a mononucleosis occurs when they are infected with B. Monocytogenes, and this organism has been suggested as the cause. However cases of infectious mononucleosis do not show increased antibodies to these organisms, and the Listerella are rather fatal infections in humans.

Nyfelt and others have isolated a bacterium which they call B. monocytogenes hominis from human cases and feel that this might be the causative agent.

However, most feel that it is a virus infection. As Rivers[7] concludes "A virus may be the cause of the disease, but more experimental work is needed to establish the fact."

Although some observers have been able to transfer the disease to human volunteers and to monkeys by injecting filtrates of ground up lymph nodes or nasal washings from these cases, others have not been able to do so. In other words, the cause of this disease is not known.

Incubation Period

From epidemiological studies, the incubation period is estimated to be about 10 days. Presumably it is transmitted as a droplet infection from person to person.

Clinical Features

This disease has very protean manifestations. Many cases must be so mild that the physician is not called to see the patient. In other cases the disease is concealed under other diagnostic disguises, and the patient recovers without the luxury of knowing that he has had such an expensively sounding disease.

The onset is variable. However, it is rarely abrupt. In only one of our cases did the disease begin at a definite time, marked by a chill. The early symptoms are those of most general infections; malaise, asthenia which may be marked, anorexia, general aches and pains, and headache which come on so gradually that it is some days before a doctor is consulted. The average interval between onset of symptoms and admission to hospital in our series, was 9 days. Coryza, sore throat are also common symptoms. As a rule the patient consults the physician because of a sore throat, or headache or backache or stiff neck, or malaise and feverishness that they thought would be better the next day but after several days is not.

Symptoms that mild cases might have are not well known. Last year we thought we had an opportunity to find this out. In one of the local hospitals a small epidemic of this disease appeared among the nurses in training. The Resident in the hospital was considerate enough to supply us with smears from these cases, and it was suggested that blood studies be done on all nurses who reported for minor therapy for colds, headaches and so forth. However we did not discover any more cases than those that the Resident was able to diagnose clinically.

Cases of this disease tend to fall into one of four categories:

1. Glandular type; seen particularly in children.
2. Anginose type.
3. Febrile type, seen especially in adults.
4. Miscellaneous types; neurological, jaundice, cutaneous, etc.

Upper Respiratory Symptoms

Sore throat is a very frequent complaint in this disease, and was noted in 65% of our cases. The appearance of the throat is very variable. Nothing may be seen on examination except a little injection of the faucial pillars. On the other hand there may be a follicular tonsillitis, there may be ulcerative lesions; there may be a membrane that resembles that of diphtheria. Smears from the throat often reveal Vincent's organisms. Cultures grow the usual host of bacteria including hemolytic streptococci. It is therefore quite understandable how these cases are diagnosed as "tonsillitis," "Vincent's infection," "Strep. throat," "Diphtheria."

Gingivitis may be marked and was so in two of our cases. The picture then may resemble that of monocytic leucemia (and some of the early cases of "cure" of leucemia were undoubtedly these cases). If the white count is low, as it may be, these may

Also can be diagnosed as "agranulocytosis." Sometimes seripiginous ulceration may be seen

and these can be diagnosed as secondary syphilis, particularly if the individual is unfortunate enough to have a rash and a positive Wassermann, which can occur in this disease.

Case: A young serviceman reported sick with malaise, fever, sore throat and a diffuse macular eruption. He had a shallow, mucoid ulcer on right tonsil. There was mild, generalized lymph node enlargement. Admission WR positive. An enthusiastic M.O. was trying to fill out the V.D. report card and refused to believe the statement of the patient that he "did not go out with girls." Fortunately treatment was withheld long enough to have blood and serological studies done; the true diagnosis was made and spontaneously the patient recovered his usual good health and his reputation as his WR soon became negative.

Herpes labalis is uncommon in this disease. As a rule, cough is not a troublesome feature, but in some cases it may be severe. As a rule, x-ray of the chest is negative and no lymph node enlargement is seen in the mediastinum.

An epidemic was described in Naples which resembled so-called virus pneumonitis, and these cases had lymph node enlargement, palpable spleens and postive HAR reactions, but not the usual blood picture[8]. However cases of pulmonary infiltrative features with classical evidence of infectious mononucleosis is reported[44, 46].

Fever

Practically all cases have a fever, but almost always this is mild; between 100-102° F. None of our cases had temperatures over 103° F. At the onset there may be a spike of fever, but more often there is a gradual rise for 4-8 days with remittent afternoon peaks, resembling that of typhoid fever. True rigors are uncommon. The fever lasts several days and may persist for weeks. The average duration of fever after admission was 8 days in our series.

Because of the type of fever, some cases are thought to be typhoid fever, particularly if they have a palpable spleen and "rose spots."

Case: A youth of 17 was admitted to hospital from the country with a diagnosis of typhoid fever. During the preceding two weeks he had gradually developed a cough, sore throat, headache and generalized mild lymph node enlargement. His temperature had been 102 during this period. Rose spots had appeared on his abdomen, and his spleen was palpable. He was slightly icteric, and was listless and somewhat confused. His white count was 5.5 thousand with 70% lymphocytes, typically those of infectious mononucleosis. His heterophile titer was 1/256. Over the next ten days he spontaneously got better. He showed no increase in typhoid agglutinins and his cultures were persistently negative.

Cardiovascular System

As a rule the pulse-rate is proportional to the fever, but in some cases marked bradycardia occurs and this is most likely to be seen in those cases that have meningismus. Electrocardiograms may show evidence of myocardial involvement[9], but this is transient in nature and no permanent damage occurs. A death has been reported, however, apparently from non-specific myocarditis.

Lymph Glands

In almost every case there is enlargement of the lymph nodes, although cases have been reported which did not show enlargement. The swelling of these glands may precede the appearance of fever and other symptoms, but it is more usual for them to appear during the first ten days after the onset of other symptoms. The enlargement may appear quickly—literally overnight. The glands do not become very large, and as a rule the younger the patient the more marked is the enlargement. They are somewhat tender, probably because of the speed with which they enlarge. Generally they disappear with the subsidence of symptoms but enlargement may persist for a year or more. They do not suppurate. Tonsillar tissue, of course, also may enlarge considerably.

The cervical nodes are most commonly involved, and the further one goes from the neck, the less often are those groups of glands involved. When other glands are enlarged then the cervical ones almost always are too, but cases have been seen in which enlargement was confined to axillary glands, and inguinal nodes[41].

Eyes

Enlargement of nodes other than cervical without enlargement of the cervical glands as well, however, should make one suspect the diagnosis.

In rare cases salivary glands themselves are involved, and the process may simulate mumps or Miculicz syndrome.

Puffiness of the eyelids is sometimes seen, occurring in only one of our cases. Conjunctivitis may occur and it is often unilateral. Photophobia is not uncommon.

Abdominal and Gastrointestinal

Loss of appetite is the rule. Nausea and vomiting is noted in 15% of cases. Constipation is also the rule, and diarrhea is said to be rare, but occurred in 10% of our cases at the onset. 15% have abdominal pain and this may appear at the beginning of the disease. Thus the vermiform appendix rears its ugly head and runs the risk of being decapitated. At laparotomy the appendix may appear quite normal, or it may show hypertrophy of its lymph follicles, much like the lymphoid tissue elsewhere.

From time to time a suspicion is voiced that some cases of "mesenteric lymphadenitis" are possibly cases of infectious mononucleosis. Three cases have been reported in which the blood picture was that of infectious mononucleosis[25]. We have had the opportunity of following the blood picture in five cases which were diagnosed as mesenteric lymphadenitis at laparotomy. One of these showed changes like those of infectious mononucleosis. The others did not.

Joints

Arthralgia is said to be uncommon, but occurred in 10% of this series. No joint swelling was noted. In one case pain was marked enough to have the diagnosis of rheumatic fever seriously considered.

Spleen

At least 50% of cases have a palpable spleen at some stage of the illness. 55% of this series had a palpable spleen. This organ does not become very large, and is not more than three fingers breadths below the costal margin. As a rule, it first becomes palpable about the end of the first week of symptoms. Usually it is a soft spleen and may be tender. Generally it can no longer be felt a few weeks after symptoms have cleared, but in some cases splenic enlargement has persisted for months and even years.

It should be remembered that splenic rupture is one of the few dangers in this disease, and therefore gentle palpation should be practiced when feeling for this organ. Spontaneous rupture of the spleen can occur and when shock appears in a patient with infectious mononucleosis this should be the first thought, and verified. Laparotomy may be life-saving here.

Liver

About 15% of cases clinically show mild enlargement of the liver, and a smaller number (10% of this series) have clinical jaundice. The jaundice was once attributed to obstruction of the common duct from enlarged portal nodes, but is now known to be associated with hepatitis which is the rule in this disease[10, 32]. If jaundice appears early in the course it tends to be marked, and these cases are often diagnosed as infectious hepatitis, whereas if it appears late in the disease it is generally mild.

Liver function tests show that liver function is impaired often. The cephalin flocculation test is generally positive (80% of this series), as are the thymol turbidity (60%) and thymol flocculation (60%). These figures agree with those of other observers[26, 27]. The Takata-ara was negative in all cases at first, but became positive later in two of them. These tests, of course, are tests of abnormal serum protein relationships and are found in many infectious diseases. Interestingly enough one case that had marked jaundice showed persistently negative tests.

These tests may be of some value in differentiating infectious mononucleosis from leucemia. We have so far not found a case of leucemia that had a positive thymol turbidity or thymol flocculation test.

As a rule these tests return to normal shortly after the symptoms have subsided, in contrast to infectious hepatitis where they tend to persist for months.

There is no relationship between positive thymol and positive heterophile tests. To date no permanent hepatic damage has been described as a result of infectious mononucleosis, and no cases of liver cirrhosis have been attributed to it.

Renal

At the end of the last century some cases of nephritis were ascribed to this disease. Hematuria has rarely occurred. No permanent renal damage has been reported. It is more likely that a febrile proteinuria associated with puffy eyelids and back pain led to a diagnosis of acute nephritis.

Hemorrhagic Phenomenon

A case associated with thrombocytopenia severe enough to require splenectomy for its control has been reported[11]. Other cases have been associated with purpura. Petechiae may appear without thrombocytopenia. Three of our cases had petechiae and two had epistaxis. The platelet counts were subnormal in two of these cases (100,000 and 150,000).

Minot described a benign acute thrombocytopenic purpura associated with lymphocytosis[19]. These cases could be confused with infectious mononucleosis, however the characteristic cytological changes are absent in Minot's purpura[3].

Skin

Rashes appear in 5-20% of cases (10% of this series). Usually they do so on 4-10th day of illness. It is rare for the rash to appear on the hands, thighs, legs or feet. Several types of eruptions are seen:

1. Typhoidal: Rose spots on the abdomen, and these may appear early.
2. Morbilliform: Resembles German measles or true measles or secondary lues. This is the commonest type of rash.
3. Scarlatiniform: May even go on to desquamation.

Also reported are erythema nodosum, urticaria, vesicular eruptions and petechial eruptions.

Central Nervous System

Signs of central nervous system disease may appear before others. Headache is common and may be very severe. 65% of this series had headache, stiff neck and sore back, and in 20% headache was the outstanding complaint.

Slow speech, confusion, cranial nerve palsies may simulate encephalitis. Menigismus may

simulate bacterial meningitis. The neurological complications have been reviewed recently[14]. They found that cases could be roughly grouped into four main types:

1. Those resembling lymphocytic or serous meningitis.
2. Those resembling the encephalomyelitis group.
3. Polyneuritis or Guillain-Barre type.
4. Neuritis.

The spinal fluid is generally clear and may be normal, or may show a moderate increase in protein and a moderate increase in cells, all lymphocytes. The heterophile reaction of the spinal fluid is always negative, as is the Wassermann reaction. Convulsions may occur[12]. Photophobia is common. Papilledema has been reported[13]. Usually the signs of neurological involvement clear completely and fairly rapidly. Personality changes may clear more slowly.

Deaths occur from neurological complications. In 500 cases in an epidemic in Copenhagen 4 deaths from respiratory paralysis occurred. 8 deaths occurred in 54 cases with neurological complications in a collected series[14].

The difficulty in early diagnosis is illustrated by the following case:

A 22-year-old student was admitted to hospital for treatment of an infected finger. His blood picture was normal on admission, and the infection cleared up with penicillin and drainage. He was ready for discharge when his temperature became somewhat elevated and he complained of malaise. Over the next few days he developed a very severe headache, stiff neck, and his temperature rose day by day to 103° F. A lumbar puncture was done and revealed a protein of 57 mg.%, no cells, all else normal. His white count was 3.0 thousand with 61% polys. and 38% lymphocytes; monocytes 1%. WR negative. Heterophile was positive 1/20 only. He looked quite ill, and stuporous but could be roused. A marrow aspiration revealed typical infectious mononucleosis cells, at a time when none were seen peripherally. The following day, however, his white count rose to 6.8 thousand with 80% lymphocytes. His heterophile titer rose to 1/320. He gradually recovered over a period of three weeks. Aureomycin had no perceptible influence on the course of his disease.

Serum sent away was reported negative for antibodies to Eastern and Western equine encephalomyelitis, St. Louis encephalitis, influenza A and B, mumps and Q fever.

Pathology

It is surprising that such a benign disease can be associated with such widespread pathological changes. This subject has been reviewed[15]. The most striking findings are:

1. Normal bone marrow sections.
2. Tissue infiltration with small round cells which may be as marked as in the leucemias.
3. Lymph nodes[16] show a maintenance of normal nodal architecture; no necrosis is seen and no giant cells. There is marked proliferation of germ centres and of reticulum cells. Invasion of the capsule does not occur. Imprints of the nodes show the typical cells.
4. Liver shows a focal hepatitis.
5. Central nervous system may show perivascular hemorrhages, engorgement of the meningeal vessels and perivascular infiltrations of cells.

The picture seen in the lymph nodes varies with the stage of the disease. The early histological changes are not known. We thought we had a unique chance to see the very early changes:

Case: 27-year-old male, admitted for tonsillectomy because of repeated attacks of acute tonsillitis. Admission, blood normal. (hb 100%, red cells 5.0, wbc 7.5, p. 75, lymphs 29%, monocytes 1%, sed. rate 2 mm, bleeding and clotting normal; platelets 215,000).

On January 25th he had a tonsillectomy done. The next day he began to feel chilly, and his temperature rose to 102.2° F. There was no response to penicillin. His wbc was 16.8 with 87% polys, 6% lymphs, 6% monos and 1% eosinophiles. By February 2nd his cervical glands and axillary glands were enlarged. His white count was now 6.5 with 45% lymphocytes. By February 8th his white count was 27.7 with 86% lymphocytes of the infectious mononucleosis type and his heterophile was 1/320. It eventually rose to 1/2560, and his Wassermann became anticomplementary. His Kahn was negative. The lymphoid tissues of his tonsil were examined with interest, but nothing abnormal was found. This biopsy must have been taken on the first day of his illness.

Prognosis

The prognosis is excellent in this disease and deaths are rare. When they do occur it is generally from splenic rupture or neurological complications. One death has been reported with an acute non-specific myocarditis.

Relapse

Relapses are said to be not uncommon, but the symptoms are milder and last a shorter time. The symptoms in relapse need not be the same as those of the first attack. In this present series we had no relapses, and it is well to be suspicious of relapsing cases:

Male, 37, from Central Europe, sent by his physician to the public wards because of malaise and fever. He had mild generalized lymphadenopathy and his spleen was palpable. His white count was 8.0 with 60% mononuclear cells. that were not typically those of infectious mononucleosis; many monocytes present. His hetero-

phile was negative. He ran a low grade fever, 100-102 for ten days and then this became normal and he felt better. As he was about to be discharged his temperature rose again, but he was anxious to leave and was sent out with a diagnosis of infectious mononucleosis. His astute physician later told us he had been cured with quinine, and a careful search of his hospital slides revealed the presence of malarial parasites.

Sequelae

No direct sequelae have been attributed to this disease.

Chronic Forms

Isaacs[18] has described a chronic infectious mononucleosis, characterized by fatigue, low grade fever, palpable lymph nodes, often palpable spleen and the presence of the infectious mononucleosis cells in the blood. The heterophile reaction is negative. We have been reluctant to accept this as an entity because no direct proof has been possible. Two of our cases may have been of this variety:

Male, 22, admitted with severe headache and fever, 101° F. Spleen and lymph nodes palpable. White count rose to 14.0 with 85% mononuclear cells. Highest HAR was 1/40. He was seen in review three months later and still complained of fatigue and still had abnormal cells in his smear. In reviewing his case history it was noticed that two years after this episode he was seen by the psychiatric department complaining of the same symptoms and also cyclic vomiting. His spinal fluid and routine blood count was normal, but no smears had been kept and no record of a physical examination was found.

Male, 23, admitted with fever of 12 days duration, sore throat and enlarged glands and palpable spleen. HAR negative; white count 11.0, but lymphocytes did not rise above 55% although typical ones were seen. His nodes became smaller, and his spleen no longer palpable and he was discharged. He did not completely recover, and one year later was admitted with sore throat, enlarged glands and a palpable spleen again. His smear showed the presence of abnormal cells, although his lymphocyte count was 42% of 8.0 white cells. Sedimentation rate 20 mm. Bone marrow aspiration normal. Liver function normal. Tuberculin test and bacterial agglutinins negative. A lymph node biopsy was considered to be typical of infectious mononucleosis.

Two years later he was again seen complaining of general aches and pains, fatigue, and enlarged cervical lymph nodes. His spleen was not palpable and laboratory findings were unchanged from the previous examination.

Laboratory Findings

Bone marrow. There are several reports on the bone marrow in this disease. Custer and Smith noted that sections of the marrow were normal. Freeman is the lone voice[22] who could not differentiate the marrow in his case from that of leucemia. Limarzi[23], in reviewing the subject, feels that Freeman's case probably was leucemia. Limarzi found that the marrows in his cases were hyperplastic, that plasma cells were not numerous and that at times there was a shift towards the more primitive granulocytes. However they were not markedly abnormal. Others have found the same thing[24]. Leitner[20] concludes that the marrow picture can be explained on the basis of fairly normal marrow admixed with peripheral blood containing abnormal cells. We have marrow aspirations from 14 cases. While nothing is seen that would be confused with leucemia, in many of these marrows we were impressed by the presence of primitive lymphocytes, differing somewhat in appearance from those in the peripheral blood; and in one case we were able to find them in marrow aspirated the day before abnormal cells appeared in the blood. We therefore feel that such cells may be found in the marrow, and that the diagnosis might be made from marrow aspiration before the peripheral blood is positive.

Blood Picture: Anemia is not a characteristic feature of this disease. We noted that not infrequently the hemoglobin tends to drop as the disease progresses; not a marked drop but not infrequently from about 100% to 88-94%. No marked anemias were encountered. However in one series of 300 cases six did show severe and rapidly progressive anemia[28], three were associated with leucopenia and thrombocytopenia, and the picture could easily be confused with acute hemolytic or aplastic anemias.

The white count is variable, and at the onset of the disease may be high, normal or low. It tends to rise to a maximum and then fall off again. The range of counts in our series was 3.0-27.7; and it is uncommon for the count to rise over 30.0.

Leucopenia is not uncommon, but generally the count does not drop below 3.0, 90% of cases show counts of 8-20.0 thousand.

The differential count in the early phases of this disease is often like that of any other acute infection, showing a rise in polymorphs. Later, however, the mononuclear cells dominate the picture and in 90% of cases constitute 60-90% of the white cells. These mononuclear cells are lymphocytes and because the term "mononuclear" is used, some people become semantically confused and think the cells are "monocytes," which they are not. These lymphocytes are abnormal ones and have a characteristic appearance. The most characteristic feature is that there is a limitless variation in appearance from cell to cell so that each cell has an individualized appearance, and if one were able to name each cell, like a human

being, one would be able to recognize it again later. This is in contrast to other forms of lymphocytosis, where by and large, each cell closely resembles each other cell of this series. In oxalated blood these cells tend to "come apart" rapidly and look even more bizarre, as the nuclei unfold and have a clover-leaf appearance. The nuclear structure is mainly that of the lymphocyte and plasma cell. Many of them have an ill-defined nucleolar structure staining purple, rather than blue. Osgood[29] noted that fenestration of the nuclei is an important characteristic of the cells in this disease. Some cells may present binuclear cells, as if the cells were undergoing amitotic division. Mitotic division may be seen. Many of the cells have the plasma-cell appearance, with the nuclear pattern in a "wheel-spoke" pattern, and the nucleus eccentrically placed in the cell.

The cytoplasm also shows typical changes. The cells tend to be large, and to have abundant cytoplasm[31] and the cell outline tends to be irregular. It stains unevenly, so that parts of the cytoplasm are dark and others light, and the edges may look as if they have been folded over in places. The cytoplasm in many of the cells is foamy or bubbly.

In vital preparations, refractile granules staining with vital dyes are seen in over 15% and usually over 25% of normal lymphocytes, whereas in this disease less than 15% of the lymphocytes show these[30].

When some complicating event occurs, such as a secondary bacterial infection, or hemorrhage into the peritoneal cavity, there is no interference with the characteristic polynuclear response that would normally occur, and the picture of infectious mononucleosis may be suppressed.

The hematological type of response that is seen in this disease is interesting in view of the recent findings in studies on adrenocortical function. In response to infections and other stresses liberation of cortical hormones produces a marked depression of the eosinophiles, and of the lymphocytes as well as a polynucleosis and "toxic" changes in the polymorphs. The absence of such changes in this disease and the finding of eosinophiles in normal numbers as well as the normal response to concurrent bacterial infections that might occur during this disease would suggest that possibly there is a different type of adrenocortical response to this infection. Indeed this response in a less marked form, is seen in many of the virus infections. It would be interesting to know what happens to 17-ketosteroid and corticoid excretion in these cases, but so far we have not been able to study any cases from this aspect, nor have we encountered such studies in the literature.

Sedimentation Rate

The sedimentation rate is not greatly affected in this disease. The highest recorded in our series was 60 mm/hr (Westigren). 65% were less than 20 mm/hr.

Wassermann Reaction

False positive Wassermann reactions are not uncommon—figures varying from 3.2-20% of cases. In our series there was one positive, two doubtful and two anti-complimentary reactions. In most cases there is an associated skin rash[33]. There is no relationship between the Wassermann reaction and the heterophile antibody reaction. As a rule the reaction is only very transiently positive and soon reverts to normal.

Heterophile Antibody Reaction

Heterophile antigens are antigens that do not have species or tissue specificity but, on the contrary, are found in a number of different animals and different tissues. These were first described by Forssman and at first it was thought that only one existed, which had been called the Forssman antigen. However several types have been described. They tend to be heat stable.

Heterophile antigens are found in the organs of the guinea pig, horses, mice, dogs; the red blood cells of sheep, goats, and in certain bacteria particularly those of the B. coli group, and also in the red blood cells of humans of groups A and AB.

In 1932 Paul and Bunnell found that humans suffering from infectious mononucleosis often had present in their sera an antibody that agglutinated cells which contained the heterophile antigen, and they used sheep's cells as a source of the antigen. The antibody present in infectious mononucleosis differs from the antibody to the Forssman antigen however, because the latter is absorbed by tissues that contain the Forssman antigen, whereas the infectious mononucleosis antibody is not.

The test used in infectious mononucleosis to test for these antibodies is generally known as the Paul-Bunnell test, or the Heterophile antibody Agglutination reaction (HAR).

Non-specific Heterophile Antibody Reaction

In most laboratories the test is done as originated by Paul and Burnell. This test is not specific for infectious mononucleosis. High titers can be found in people who are receiving liver injections. In serum sickness a great increase in HAR often occurs and indeed people who are given horse serum who do not have serum sickness may show a rise in titer. Increased titers have also been reported in people suffering from B. coli bacteremias or septicemias; and also in monocytic leucemia, chronic lymphatic leucemia, Hodgkin's disease, agranulocytosis, polycythemia vera, tuberculosis[34], trypanosomiasis (26%)[35] patients receiving A and AB group specific substance of Witebsky (but here the antibody is absorbed by group A substance, whereas the antibody in infectious mononucleosis are not), and in virus pneumonitis.

In 50-90% of cases of infectious mononucleosis this test becomes positive. It was positive in 55% of this series. Most laboratories consider dilutions less than 1/64-1/80 as negative, and the titer must be greater than this in order to be considered positive.

The test is not positive early in the disease but tends to become so on the 6-26th day of illness. It may remain positive for 2-4 months, but as a rule it is found in high titer only for a few days and therefore may be missed if interval testing is not done.

We have never seen a positive HAR in the absence of characteristic changes in the blood, but apparently others have seen positive HAR's before or after the smear was characteristic.

Modifications of the Test

Davidson has attempted to make this test more specific. He absorbs the Forssman antibodies on guinea-pig kidney before doing his test. He claims that infectious mononucleosis is the only disease in which the antibody is not absorbed by the kidney, and that titers much lower are significant, if this modification is done. Others have found this not true, however[35].

It has also been claimed that in addition to an increase in the characteristic HAR which is found in this disease, and which is not absorbed by guinea-pig kidney but is absorbed completely by horse red cells, that there is a rise in true Forssman antibody, and some have suggested that this antibody has somehow been converted to a different type in this disease[36]. It has been reported that Forssman antibody can produce purpura and thrombocytopenia when injected intravenously[37] but whether or not this could explain the hemorrhagic phenomenon associated with some cases of infectious mononucleosis is not known.

Other factors may modify the titer that is found; for example if the test is done in the cold it is more strongly positive than if done in warm temperatures. Some have noted that using normal human serum or 20% bovine albumin for diluting. instead of saline, increases the titers, but others have denied this. No blocking antibodies have been shown to occur in this reaction. Rapid splide methods have been proposed[38, 39].

The antigen of beef red cells that absorbs the antibody in this disease can be extracted from the cells with boiling 80% ethyl alcohol, and inhibits agglutination of sheep cells by the infectious mononucleosis antibody in dilutions of one in two million. This may be of use in the test eventually[40].

As few laboratories have sheep wandering around them, and as sheep cells do not keep well, the test is done in certain selected laboratories. However it should be possible to prepare stable antigens so that possibly a modified test will be available to most hospital laboratories.

Differential Diagnosis?

In the preceding discussion a number of diseases have been mentioned that may be connected with infectious mononucleosis. To show how often other diagnosis can be attached to these cases there is listed below the admission diagnosis in this series, where such a presumptive diagnosis was made:

Infectious mononucleosis	4
Acute tonsillitis	15
Infectious hepatitis	2
Leucemia	1
Pyrexia of unknown origin	4
Influenza	4
Abdominal pain	1
"Blood dyscrasia"	1
Pleurisy	1
Acute sinusitis	1
Encephalitis	1
Diphtheria	1
Typhoid fever	1

Factors that present difficulty in differential diagnosis are:

1. The clinical picture of this disease superficially resembles that of many other diseases.

2. The blood picture is often not present when the patient is first seen. In many cases blood studies are done on admission, and if this picture is not suggestive of infectious mononucleosis this diagnosis is ruled out of the differential by the physician. Repeated studies may be necessary.

3. HAR is often negative early in the disease.

The diagnosis of infectious mononucleosis can be made in the absence of a positive HAR. However it probably cannot be made in the absence of the typical blood picture, although it may be found eventually, that cases of this infection can occur without giving these changes. Therefore, in the final analysis, diagnosis of this disease is an hematological one.

In addition to the diseases already mentioned that may be confused with infectious mononucleosis, another one should be particularly stressed.

This disease is brucellosis. In brucellosis the clinical picture may be very similar to that of infectious mononucleosis. Also the sedimentation rate is often not increased, and the blood picture may superficially resemble that of infectious mononucleosis. Thus cases of brucellosis may be mistakenly called infectious mononucleosis. The reverse is also true. When routine HAR are done on samples submitted for brucella agglutinins a considerable number of these are positive.

There are certain other diseases in which the blood picture may superficially resemble that of infectious mononucleosis. Leucemias may sometimes be had to differentiate on clinical and even on hematological grounds, but the bone marrow differentiates these one from the other as a rule.

Rarely in chronic lymphatic leucemia, however, the bone marrow may be normal.

In infectious lymphocytosis there is a marked increase in lymphocytes, but these do not resemble those seen in infectious mononucleosis.

In pertussis high white counts with marked absolute lymphocytosis may be seen but again these cells are normal in appearance.

Marked monocytosis can occur in malaria, subacute bacterial endocarditis, tuberculosis and so forth and superficially resemble infectious mononucleosis, but should not fool anyone familiar with the cytological picture of these cells. Lymphocytosis appears in diseases uncommonly seen here (Tularemia, Heberfeld's disease (Brazil), and Mossman River Fever (Australia), which might also superficially mimic infectious mononucleosis.

Possibly a more common source of error is the postinfectious lymphocytosis. During recovery from many infectious diseases there is a rise in lymphocytes to as high as 60-65% of the total cell count. This is particularly likely to occur in children. Some of these cells may resemble the cells of infectious mononucleosis, but these cells are in the minority, and generally do not present much difficulty.

Treatment

There is no specific treatment for this disease. They recover more quickly at rest and should be treated at rest during the febrile period of the disease. General symptomatic measures are indicated. If secondary bacterial infection occurs antibiotics are useful, but do not in themselves affect the course of the infectious mononucleosis (penicillin, sulfonamides or aureomycin). It has been claimed that sera from patients who have recovered from the disease; or scarlet fever convalescent serum intravenously (60-100cc) speeds recovery.

As a rule it is not necessary to treat these cases very vigorously and it is the very rare case that requires special attention because of severe neurological complications, ruptured spleen or severe hemorrhagic phenomenon.

Recently it has been reported[47] that ACTH or cortisone will alter the blood picture in this disease, although nothing was said about the clinical features. One would expect, on theoretical grounds, that they would respond clinically as well but whether or not they would relapse when the medication was discontinued has not been reported.

The problem of chronic infectious mononucleosis, if it exists, is still sub judice.

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SURGERY

Gastric and Intestinal Intubation*

G. Gavin Miller, M.D.
Surgeon-in-Chief, Royal Victoria Hospital, Montreal

Surgery now appears to be in the middle of a period which may well be known as the intubation period. It sometimes seems to me that about a quarter of the patients in the surgical wards of the hospital, especially those on my own service, which is largely a gastro intestinal service, have red rubber tubes stretching from the nose to a drainage bottle. Surprisingly enough, the patients appear to be quite comfortable, and for the most part, accept this situation without too much complaint.

Everyone has experienced the distress of a distended stomach and the relief afforded by emptying it. For many years efforts have been made to accomplish this emptying by artificial means. At the end of the ancient Roman banquets, an emetic was frequently served to induce vomiting, or the uvula was tickled with the finger or feathers for the same purpose. In seventeenth century Europe, brushes were used to clean out the stomach. John Hunter reported in 1790 on the treatment of a patient suffering from paralysis of the muscles of deglutition which he aided by means of conveying food and medicine into the stomach. He used the fresh skin of an eel drawn over a probang or stylet, the end of which was cushioned by a small sponge. This was passed through the mouth into the patient's stomach. To introduce the food or medicine, he fastened a bladder and wooden pipe to the other end of the eel skin. By squeezing the bladder, the food and medicine could be forced into the stomach.

Following John Hunter, numerous references appear in the old medical literature on the advisability of intubating the human stomach. There is no positive evidence, however, that this was ever accomplished until Physick, a surgeon of Philadelphia, in 1813, reported washing out the stomach of a child who had been poisoned with laudanum, by means of a urethral catheter and syringe. It is interesting to note that we still use a small sized urethral catheter for gastric suction in infants and small children. A few years later, Sir Astley Cooper became interested in the subject of gastric lavage and put on a demonstration of a new tube and technique which had been developed by an English surgeon, Jukes.

In 1869, Kussmaul published an account of twelve cases of dilatation of the stomach caused by pyloric obstruction. The obstruction was probably due, in these cases, to peptic ulcer. This paper is reported to have given a great stimulus to Billroth's interest in gastric surgery.

The use of siphon drainage rather than forced suction next came into use, chiefly for its ease of application which necessitated little attention on the part of the medical and nursing staff.

Double recurrent stomach tubes were described in 1870, but were soon discontinued because of their large size.

The modern gastric tube was developed by Ewald. Prior to his interest in the study of gastric physiology, the stomach tubes were stiff and only partly flexible as it was thought necessary to introduce these tubes into the stomach by force. Ewald developed the technique of passing soft pliable rubber tubes by securing the co-operation of the patient.

The last quarter of the nineteenth century marked the development of the duodenal tube. An American, Fenton Turck, intubated the duodenum by the use of a specially constructed tube which encased a flexible metal core. This method was cumbersome and little used on this account. Duodenal intubation came into common use with the development of the simple rubber tubes with the weighted tips by each of two different men, Maurice Gross and Max Einhorn, in the same year, 1909. Within twelve months, duodenal intubation, chiefly for the study of gastro-intestinal physiology, came into widespread use in Europe and America.

In 1921, Levin of New Orleans, described the smooth catheter-like duodenal tube which could be introduced through the nose. This tube is still the one most commonly used both for diagnostic and therapeutic measures.

The use of the duodenal tube as a means of therapy naturally developed out of its use as an investigative tool. A report from Germany by Westerman in 1910 contained a description of fifteen cases of peritonitis which were treated by continuous siphon drainage by means of a gastro-duodenal tube passed through the nose. Siphon drainage then came into common use, particularly for post-operative distension. The next occurred with Ward's description of the use of continuous suction combined with duodenal tubes in cases of peritonitis and acute dilatation of the stomach.

Owen Wangensteen, in 1931, first described the treatment of intestinal obstruction by the use of continuous suction through a duodenal tube and, in 1933, he and Paine extended the use of constant suction to the prophylaxis of abdominal distension. It was soon evident, however, that advanced abdominal distension did not respond very readily to suction applied through a simple duodenal tube.

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However, shortly after Miller and Abbott described their long double lumen balloon tipped intestinal tube and its use in the study of gastro-intestinal secretions in 1934. The balloon, when inflated, carried the tube down the intestines. Many surgeons applied this tube for the decompression of the distended intestine which occurred in peritonitis or intestinal obstruction.

The value of the long intestinal tube in such cases was rapidly established, however, the construction of the Miller-Abbott tube, with its small suction lobes and narrow suction lumen, caused frequent failure of the suction because of plugging with the particulate matter of the gastro-intestinal tract. Furthermore, it was difficult to get the tube to pass from the stomach into the intestinal tract. This was particularly evident in cases of severe distension. These objections led to several modifications and improvements. The development of the technique of using a mercury weighted balloon was described by Harris in 1944, who later designed a single lumen tube with a balloon similar to the Miller-Abbott type.

Cantor designed a tube with an exceptionally large lumen and perforations and with a balloon at the very end of the tube so that full use could be made of physical properties of the contained mercury.

These tubes are briefly described in the accompanying illustrations. We see that gastro-intestinal intubation, as we know it today, gradually evolved over a period of more than a century. Tubes were first used for feeding and for the administration of medicine, later as a means of removing swallowed poisons and for the relief of gastric distension in the presence of pyloric ulcer, next as a means of studying gastro-intestinal physiology and finally as a means of complete decompression of all parts of the gastro-intestinal tract. In some cases, suction can be combined with feeding or double suction can be carried out using modifications of the long intestinal tube.

I well remember when I was an interne, the frequent post-operative complication of so-called "acute dilatation of the stomach." The treatment for this serious condition consisted of washing out the stomach once or twice a day. The tube was large, had a funnel at one end for pouring in the water and a bulb in the middle for sucking out the water. It was passed into the stomach through the mouth. This gave temporary relief but soon had to be repeated. This procedure usually exhausted both the patient and the interne. There were obvious defects to this method; it was cumbersome, fatiguing to the patient, and not initiated until distension had already occurred, and then done only intermittently. Emptying the stomach did, however, prevent the continuous retching and regurgitation of the dark green stomach contents,

Indications

Gastro-intestinal intubation is indicated whenever abdominal distension occurs, e.g., intestinal obstruction, paralytic ileus or peritonitis.

Paralytic or adynamic ileus can be successfully treated by adequate deflation with a long intestinal tube. Better still, it can be prevented by the preoperative use of a short gastro-duodenal tube of the Levin type. The use of prophylactic naso-gastric suction has made paralytic ileus a rare complication and its successful treatment by section has lowered the once attendant mortality to a very low figure.

The short tube works well in preventing distension as the greatest (65-75%) cause of gaseous distension of the intestine is swallowed air. The remainder of the gas in the intestine comes from gaseous interchange with the blood and from intestinal fermentation. This proportion (25-35%) of gas, of course, can only be removed by a long tube. How often does one see a highly-strung business man belching and gagging following an operation, developing a serious degree of abdominal distension in a few hours. This distension can be prevented by early intubation. Our rule is that at the first sign of gagging or epigastric fullness, the gastro-duodenal tube is passed and connected to a continuous suction apparatus.

I have watched patients, at operation under spinal anaesthesia, swallow air at such a rate that their stomachs became inflated like footballs in a few minutes. The importance of preoperative intubation, with the maintenance of suction, during operative procedures on the gastro-intestinal tract is very real. In 1200 gastric resections, we have had no case of paralytic ileus in the absence of peritonitis. Distension is very easy to prevent, but once well established, difficult to relieve, even with a long intestinal tube. I have never found drugs or enemata much use in these paralytic cases.

All cases of intestinal obstruction of either the large or small bowel should be intubated without delay. Relief of an obstruction of the colon in which there is an intact ileocaecal valve is not the rule unless the long tube can be made to enter the colon, however, intubation and suction can prevent the spread of the distension to the small bowel.

The distension due to a small bowel obstruction can be readily decompressed with a long tube and suction.

Careful judgment is required in the treatment of mechanical intestinal obstruction by means of intestinal intubation. Strangulation may be present almost from the start or may develop rapidly during the course of therapy. If such occurs, immediate operation is, of course, necessary.

If it becomes necessary to perform caecostomy or colostomy in large bowel obstruction, the colon

proximal to the lesion may be thoroughly cleaned out by the use of an intestinal tube and irigation.

The mortality of peritonitis, although much reduced by the use of suitable chemotherapeutic agents, can be reduced still further by the additional use of intestinal intubation and suction.

I have found that a very useful procedure in gastric surgery is the introduction of a Levin tube into the proximal or duodenal end of the gastro-enterostomy. This prevents proximal loop distension which is at times the precipitating cause of a "blow-out" of the duodenal stump. This manoeuver is mandatory in such cases where extensive duodenal scarring prevents a careful three layer closure. Decompression of the gastric stump may be accomplished at the same time by using a second Levin tube or by using a double lumen tube of the Rawson-Abbott type.

We have found this Rawson-Abbott tube to be of definite value in selected cases; chiefly those with gastro-intestinal external fistulae. The drainage from the fistula can be controlled by the proximal suction division and the patient fed via the distal feeding tube.

Types of Tubes

Our experience has been confined to the use of the Levin, Miller-Abbott, Rawson-Abbott, Harris and Cantor tubes and the use of urethral catheters in infants.

We have, of late, used the Cantor tube in all cases where the long intestinal tube has been necessary.

The Cantor tube is a design which largely eliminates the objections to the classic Miller-Abbott tube, i.e., the small bore, small suction holes, the balloon fixed on the shaft of the tube and the technical difficulties which accompany the use of a double lumen tube.

In the Cantor design, the leading end of the tube is the bag containing mercury. The tube does not pass through this bag to end beyond the bag with a perforated metal end as it does in the Miller-Abbott. The bag containing mercury will, by its weight and "free flow" assist by gravity the carrying of the tube down the intestine. Like the Harris tube it is a single lumen tube, but of wider bore (18 Fr) and has much larger perforations so that it is the most useful decompression tube available. The rubber is radio-opaque so that x-ray observation of the passage of the tube is made easy. The Cantor tube is marked in a way to make it as fool-proof as possible. Seventeen inches from the balloon is an "S" meaning that when this point is at the teeth, the balloon has entered the stomach. The second mark "P" is six inches beyond the "S" mark. The tubing is at the pylorus. The third mark "D" is six inches beyond the "P" and when this mark enters the nose there is sufficient tubing to carry the balloon through the duodenum. From there on the tube is marked in feet. When peristalsis is present, the tube will rapidly pass down the bowel. In the absence of peristalsis, more attention must be given to this problem and by, if possible, movement of the patient, or ambulation, the tube should be permitted to proceed by gravity.

Technique of Passing the Tube

Standard practice calls for passing the tube through the nose. This method is usually the easiest; it also prevents the tube being bitten and destroyed, leaves the mouth free for eating, and is more comfortable to the patient. The tube is passed between the middle and inferior turbinates. Occasionally these may be greatly swollen if the patient is subject to frequent rhinitis or hay fever. In these cases a decongestant such as ephedrine should be used to shrink the swollen mucosa. If the patient has a deviated septum, the tube should be passed through the side with the larger opening. It is important to make every effort to overcome apprehension on the part of the patient. Every encouragement should be given the patient, his co-operation should be obtained; an injection of morphine and atropine before intubation is attempted is often a help, and if the nares are sensitive and the patient unco-operative, the mucosa should be anaesthetized with 2% Pontocaine. The surgeon should be gentle and sympathetic with the patient, and not hurried. If it appears impossible to pass the tube through the nose, it can then be passed through the mouth. At times a small catheter can be passed through the nose, brought through the mouth, fastened to the end of the long tube which can then be brought through the nose in the reverse direction. Never forget that the more confidence the patient has in the doctor the less will be the ordeal of gastro-intestinal drainage in a nervous or resisting patient. When the tube has passed into the oesophagus, it will be propelled into the stomach by contraction of the oesophagus and relaxation of the cardiac sphincter. However, a history of dysphagia suggests the presence of carcinoma, cardiospasm, diverticuli or even stricture. Oesophageal varices may be injured by the passage of a tube and cause a severe haemorrhage. The suspicion of the presence of such abnormalities suggests the advisability of x-ray study before the tube is passed. The oesophagus ends approximately 40 cms. from the teeth and this point should be marked on the tube so that it is known when the cardia is reached. About fifteen to twenty centimeters of tube must then be allowed to enter the stomach in order to allow it to reach the pylorus. Another fifteen centimeters will allow the tube to pass the mesenteric vessels and into the jejunum.

All too frequently a tube is passed too quickly into the stomach and coils on itself, thereby having no chance of passing through the pylorus. If a

weighted balloon is used and the patient is lying on his back, the tube may be trapped to the left of the spine. Therefore, the patient should be turned on his right side so that the weighted balloon will move over towards the plyorus. If the patient has the "J" type of stomach, the mercury weighted bulb will tend to lie below the pylorus. Raising the foot of the bed will bring the bag tip towards the pylorus, where it will engage and pass into the duodenum. With a high "Steerhorn" stomach which lies across the upper abdomen, elevation of the foot of the bed is not so important. If gastric resection, or gastro-enterostomy has been carried out the patient should sit upright. The tube passes more readily through the stomach when the tone is good and peristalsis is active. Once the weighted tube has passed through the first part of the duodenum, which is evidenced by the presence of bile in the aspirated contents, the foot of the bed is lowered and the head of the bed raised. The patient is then turned on the left side so that the weighted balloon can follow the direction of the third part of the duodenum and to allow the mercury to insinuate itself past the mesenteric vessels. Cantor has emphasized the Ligament of Treitz as an obstructing factor in the further passage of the tube into the jejunum and suggests annulation if the advance is arrested at this point. Once the tube has passed this point, the balloon, whether air-filled or mercury weighted, acts like a bolus and peristalsis pushes it down the bowel. If the bowel is atonic, the weighted balloon will pass down by its own weight and this is helped by frequent movement of the patient. It has often been noted that with marked intestinal distension the air-filled balloon makes a slow progress down the ileum and for that reason we prefer the simplified Cantor tube with its large lumen, large perforations and weighted balloon tip. With movement, and better still, if possible, with ambulation, the tube will quickly progress and relieve the distension throughout the bowel. It is interesting to see at operation, occasionally the whole small bowel contracted and empty about three or four feet of tubing. Six feet of tubing is sufficient to pass from the mouth to the rectum. Once in the large bowel, the tube will pass on down but aspiration is often difficult due to frequent plugging of the tube by stool, requiring repeated attention. For obstructive growths in the left colon decompression has not been successful in our hands and it has usually been necessary to resort to caecostomy.

Complications

These are four types of complications:

1) Direct injury to patient.
2) Malfunction of the tube.
3) Metabolic disturbances.
4) Respiratory infection.

1) Injury may result from rupture of oesophageal varices and occasionally laryngeal lesion may develop after prolonged use.

2) Malfunction of the tube may include twisting or knotting of the tube, over inflation of the tube with absorbed gas from the intestine or from fluid introduced by the attendants.

3) Metabolic disturbances. The loss of fluid and electrolytes during the use of gastro-intestinal intubation with continuous suction leads to marked dehydration and electrolyte imbalance.

It is important to realize that a malfunctioning gastro-duodenal tube can be as impoverishing to the patient's body fluid as a high intestinal obstruction. All fluids removed must be collected in a trap bottle carefully measured and replaced volume for volume with physiological saline.

A fact not generally realized is that allowing the patient to drink unlimited quantities of water when gastric suction is being used washes out, in the presence of normal gastric acidity, large quantities of chloride; in one recent case study as much as 24 grams in one day. It is advisable to limit oral fluid intake to sips of water. If water must be given in the interest of morale, it should be in the form of isotonic saline. The isotonicity of glucose drinks is not adequate because of the lack of the chloride ion.

If the proper type of tube is used in the correct situation, and if careful attention is paid to the technique of passing the tube and maintaining its patency, and if special care is taken to maintain the patient's nutritional requirement, the use of gastric and intestinal intubation offers the surgeon an indispensable adjunct in the curative and prophylactic treatment of surgical gastro-intestinal disease.

CASE HISTORIES—SURGICAL

Carcinoma of Stomach Subtotal Gastrectomy

S. S. Peikoff, M.D., F.R.C.S. (Ed.), F.R.C.S. (C), F.A.C.S.

This is the ninth of a series of Case Histories which will appear in the Review each month. The purpose of these publications is not to present rare or unusual cases but rather to consider the routine management of common surgical conditions.

Case No. 47-15366, Mr. H. S., St. Boniface Hospital. Color, white. Age, 48 years. Occupation, farmer. Date of admission, November 26, 1947. Date of operation, December 3, 1947. Date of discharge, December 20, 1947.

Complaint on Admission

1. Discomfort and pain in pit of stomach, 1½ years. 2. Poor appetite, 1 year. 3. Loss of weight, 20 pounds in 1½ years.

Present Illness

About 1½ years previously (March. 1946), patient began to complain of a fullness or discomfort in epigastrium. Prior to this he was always a hard working, healthy farmer, weighing around 180 pounds; and had never consulted a doctor except for a bullet wound in the shoulder. He soon began to complain of mild discomfort and gnawing pain after meals. This pain seemed localized to about one inch above the umbilicus and to the right. It did not radiate. It was occasionally relieved by food but not always. There was no nausea or vomiting and appetite was good.

In July, 1946, he felt his bouts of indigestion became annoying to him. His pain was not severe, rather gnawing or boring at times, but since he never experienced pain before, he became alarmed and consulted a doctor in Saskatoon. He was X-rayed, and told that there was "something wrong with his stomach" and was placed on a milk diet.

He got relief at first for a few weeks, but soon developed a dull aching pain—more or less continuous, especially after solid foods and particularly meat. He didn't feel hungry and began to develop a disinclination for food; and this in spite of hard day's work in the field. He lost about eight pounds during these three months and noticed some weariness and weakness especially at nights.

In September, 1947, his pains became worse, though never severe. He had occasional nausea and sour eructations, but never vomited. On one occasion his stool was streaked with blood. He had lost another twelve pounds and now weighed 163 pounds—a total loss of 20 pounds since he first became sick. His distaste for food became more or less marked and work became an effort. His bowels, previously regular, were becoming increasingly constipated—every second or third day, and he began resorting to the use of laxatives. There was no history of jaundice or dysphagia.

Inventory by Systems

Eyes—Vision good. No diplopia.

Ears—Hears well. No vertigo or tinnitus.

Respiratory—No history of cough or haemoptysis. No dyspnoea or pain in chest.

Cardio-vascular—No history of rheumatic fever or syphilis. No palpitations, substernal pain, dyspnoea on effort, or dependent oedema.

Gastro-intestinal—See present illness.

Genito-urinary—No frequency. No nocturia or haematuria.

Nervous system—Some generalized weakness. Sleeps poorly—doesn't know why. Not nervous type.

Musculo-skeletal—No aches or pains anywhere except in abdomen. Gradual weakness.

Metabolic—Loss of about 20 pounds (182-152 pounds) in past 1½ years. No heat or cold intolerance.

Past History

Does not remember having childhood diseases. Never consulted doctor before except for a bullet wound of right shoulder in 1917. No illnesses. No operations. No other accidents.

Family History

All in Europe. Has not heard from them for over twenty years.

Knows of no incidence of malignancy or tuberculosis.

Married—Four children, all well. Wife, alive and well.

Hard working farmer — smokes moderately. Very occasional drink.

Physical Examination

Patient is a pleasant, apparently fairly well-nourished man, whose history of his present illness does not correspond with his outward appearance. He does not appear to be in distress or pain, and his color is good.

Head and Neck:

Cranial nerves—Intact.

Eyes—Lids and conjunctivae normal. Pupils react to light and accommodation. No ptosis or exophthalmos. Ocular fundi normal.

Ears—Auditory canals and tympanic membranes clear.

Mouth—Tongue moist.

Teeth—Some carious teeth. No pyorrhoea. No abscesses.

Throat—Clear. Tonsils small.

Neck—No lymphadenopathy. Thyroid not palpable.

Chest:

Heart—Normal size. Apex beat 3½ inches from midline in 5th interspace. Regular rhythm. Rate 74 per minute. No extra systoles or murmurs. Blood pressure 120/80.

Lungs—Thoracic cage normal. Movements equal and symmetrical on both sides. Tactile fremitus good. No dullness on percussion. Breath sounds normal. No adventitious sounds.

Abdomen—Normal contour. No apparent masses or distension. Moves normally with respiration. No dilated veins. Tender area in epigastrium just about one inch above and to right of umbilicus. No masses palpable. No rigidity. Liver and speen not palpable. Reflexes present and equal.

Genitalia—Both testicles present. No hydrocele or herniae. Testicular sensation normal.

Extremities:

Upper—Evidence of penetrating wound through point of right shoulder. Movements good. No wasting or deformity.

Reflexes:	Right	Left
Biceps	††	††
Triceps	†	††
Supinator	†	††

Lower—Movements good. No wasting. No edema. No varicosities. Good pulsation in dorsalis pedis and tibialis posterior arteries.

Reflexes:	Right	Left
Knee	††	††
Ankle	††	††
Plantar	V	V

Rectal examination — External hemorrhoids — protruding left hemorrhoid. No fissures, polyp or masses. Prostate—normal in size and consistency.

Clinical Laboratory Findings

Urinalysis—November 27, 1947. Color, straw, clear. Reaction, acid. Specific gravity insufficient amount. Albumin, 0. Sugar, 0. Micro: occasional pus cell. Mucous threads present.

Blood count—November 29, 1947. Red cells, 5,260,000. Hemoglobin, 107%. Color index, 1.03. White cells, 8,750. Differential leucocytes, polymorphonuclear neutrophils, 72%; large and small lymphocytes, 28%.

Blood Wassermann — November 30, 1947. Negative.

Gastric Analysis—November 27, 1947.

	Free HCL	Total Acidity
Fasting	0	8
½ hour	0	8
1 hour	0	10
1½ hours	0	12
2 hours	0	8

Blood ††

Lactic Acid ††

Boas Oppler bacilli present.

Barium Series—November 28, 1947.

Fluoroscopy of the chest shows a metallic fragment over the right upper lung field. Otherwise negative. The mucosal pattern in the mid-portion of the stomach and pylorus shows considerable distortion, the appearance of which would suggest the presence of a malignancy of limited extent. Duodenum appears normal. Four hours: there is a small fleck of gastric residue, with the head of the meal in the lower ileum. Twenty-four hours: there is a residue in the proximal half of the colon. Appendix is not visualized. Caecum is not tender on palpation. Summary: Infiltrative changes in the gastric wall, considered evidence of a neoplastic process. (Dr. F. G. Stuart).

Gastroscopic—November 28, 1947.

Portion of stomach visible showed decreased peristalsis and one suspicious area of malignant infiltration near greater curvature—just on periphery of field of vision. (Dr. D. S. McEwen).

Blood Proteins—December 1, 1947.

Total proteins, 7.1%. Albumin, 3.45%. Globulin, 3.65%.

Pre-operative Diagnosis

Carcinomatous ulcer of the greater curvature of the stomach.

Large benign ulcer of the greater curvature of the stomach.

Indications for Operation

The comparatively short history of dyspepsia in a man 48 years of age, anorexia, loss of weight, anacidity, and radiological evidences, all point to a gastric ulcer, benign or malignant. Operation is indicated to determine the diagnosis and resectability.

Pre-operative Care

The pre-operative condition of the patient was satisfactory in spite of several months of indigestion and anorexia. His hydration and nutrition were good, the blood proteins being at a normal level, with the proper ratio of albumin and globulin fractions. Matched for blood transfusion, the blood to be administered during the operation. Stomach lavage every morning—1 dram of HCL to a pint of water. High protein, high carbohydrate, high caloric, non-residue diet was given for several days. Amino acids by mouth. Vitamin B, and Vitamin C (500 mgm.) daily. Patient sent to operating room with a Levine tube in the stomach.

Operative Technique and Operative Findings

Position—Supine. Skin of abdomen painted with merthiolate. Draped.

Incision—Right paramedian from xiphoid process to just below the umbilicus. Skin, superficial fascia, and anterior rectus sheath incised vertically;

rectus muscle retracted; posterior sheath and peritoneum incised vertically; skin towels applied.

Exploration—Since the stomach was apparently the obvious site of pathology, all other abdominal organs were inspected and palpated first. The liver was inspected and palpated for secondaries, but none were found. The gall bladder appeared normal; no adhesions. The entire large bowel was normal. The pelvis was free. The stomach was then examined. In the lower third of the stomach along the greater curvature, one could feel a hard disc-like mass about 1½ inches in diameter. The peritoneum over this area had a glassy appearance but there was no evidence of perforation or adhesions anteriorly. An opening was made into the gastro-colic omentum, and the posterior wall was found to be free of adhesions. On invagination of the stomach with the fingers, one could feel a large shallow crater with rolled, raised edges involving the greater curvature and the adjacent portion of the anterior and posterior walls. The pyloric and duodenal glands were not enlarged; there were no enlarged glands in the gastro-hepatic omentum or the porta hepatis. Two or three bean-sized glands were found along the greater curvature in the region of the growth but did not have the hard and shotty characteristics of malignant glands. The entire omentum was palpated for metastases and was found to be free. The glands at the root of the mesentery were not enlarged. The pancreas was normal in consistency. The kidneys and spleen were normal.

The growth being more or less localized, the absence of glandular involvement, and the absence of metastases, made gastric resection encouraging.

Technique—A large abdominal pack was inserted to wall off the small intestines. The first step in this operation consisted in freeing the greater omentum from the transverse colon. This was done by holding the omentum and the colon apart and incising with the point of a scalpel along the bloodless plane between them. This completely separated the omentum from the transverse colon with very little bleeding. The stomach was then elevated from below and the duodenum separated from the pancreas by careful sharp-knife and gauze dissection. The pancreatico-duodenal artery was doubly ligated. An opening was now made in the gastro hepatic omentum as high above the lesser curvature as possible and the vessels in the lesser omentum were ligated one by one, working towards the pylorus. The right gastric artery was doubly ligated. The duodenum was further mobilized by sharp dissection and gentle traction at its upper border. The lower part of the stomach and the duodenum being completely mobilized, division of the duodenum was the next step. A gauze pack was placed under the site of section, two small Payr's clamps were applied to the duodenum, about ¾ of an inch from the pylorus. The duodenum was divided with cautery between the Payr's clamps. The Payr's clamp with the stomach were wrapped in a towel and turned upward over the left edge of the abdominal wound. The Payr clamp containing the duodenal stump was rotated laterally to expose the under surface of the duodenum and further dissection here permitted adequate mobilization to allow a sufficient cuff for inversion. The duodenum was now closed by a running suture applied over the Payr clamp. The suture was then tightened and the Payr clamp removed at the same time produced an inversion of the edges of the duodenal stump. This suture was now returned as a sero-muscular suture back to its starting point, thus producing a complete closure of the stump. With the duodenum closed, the stomach was again picked up; pulling downwards on the stomach placed the left gastric artery on tension. And a curved hemostat was carefully worked through a rent between the lesser curvature and the coronary vessels. The vessels were then doubly ligated and transfixed with chromic catgut i. This was inserted at the uppermost part of the lesser curvature. The distal end of the coronary artery with its omentum, fatty tissue and glands, was stripped off the lesser curvature, in this way clearing all the involved tissue downwards from the highest point. This completely mobilized the stomach and allowed it to drop down quite freely.

Gastro-jejunal anastomosis—The ligament of Treitz was now located and a long loop of jejunum about 18 inches from this point was brought out over the transverse colon and approximated with the posterior aspect of the stomach at the proposed site of the anastomosis. The loop was placed so that the proximal end of the jejunum was at the lesser curvature and the distal end at the greater curvature (isoperistaltic). This loop was now attached to the posterior aspect of the stomach by two sutures of silk inserted at the upper and lower ends of the anastomotic site. These sutures were left long and held in a hemostat. Tension on these sutures prevents axial rotation of the jejunum and makes it easier to insert the subsequent sutures. Intestinal clamps were not used at any time. A row of interrupted black silk mattress sutures were now placed along this line about ¼ inch apart. A second sero-muscular chromic catgut suture on a straight atraumatic intestinal needle was commenced at the greater curvature and on reaching the lesser curvature, was locked twice, and at this point the remaining suture was wrapped up in gauze for continuation on the anterior wall later. A gauze pad was placed under the anastomotic line and all the viscera packed off. Double technique was used from now until the anastomosis was complete, and all soiled or contaminated instruments were placed on a special tray and removed for re-sterilization. The two stay sutures

were now put on tension and mechanical suction made available. An incision was made in the posterior aspect of the stomach about ¼ inch from the suture line and to almost the entire length of the anastomotic line. Vessels in the stomach wall were ligated with chromic catgut 000. A parallel incision of the same length was now made in the jejunal loop. At this point the duodenal tube was guided into the distal loop of the jejunum.

A third layer of chromic catgut sutures was introduced through and through—mucosa, muscle and peritoneum of jejunum to peritoneum, muscle and mucosa of the stomach in an interlocking fashion with a straight atraumatic needle; this was continued up to the lesser curvature where the suture was locked twice. The anastomotic area was now re-examined for any oozing.

The anterior wall of the stomach was then transected. All bleeding vessels in the stomach wall were ligated with chromic catgut 000. The interlocking suture was continued as a Connell, in, out and over stitch, inverting the anterior walls of the jejunum and stomach in so doing, and tied when reaching the greater curvature. The second sero-muscular suture was then picked up, continued so as to approximate the anterior walls and tied to its original end. An anterior sero-muscular layer of mattress silk sutures was introduced in the anterior wall. A tab of gastro-hepatic omentum was stitched into the upper angle of the anastomosis, and to the jejunum to reinforce the angle and support the jejunum; a similar tab of gastro-colic omentum was tied into the last lower stitch.

Entero-anastomosis—A jejuno-jejunostomy was now performed between the proximal and distal limbs of the jejunal loop at a level corresponding with the most dependent part of the proximal loop. A three-layer suture was made with the same technique as described above. The stoma being about 1¼ inches long.

The gastro-jejunal anastomosis and entero-anastomosis were now completed, packs removed, and sponges counted. Instruments in use in the anastomosis were discarded. Gowns and gloves were changed. The duodenal stump was re-examined and Morrison's pouch and lesser sac were inspected for pools of blood which may have collected during the operation. The peritoneum was closed with a continuous chromic catgut i suture. The fascia was closed with interrupted chromic catgut i sutures and the skin with interrupted silkworm gut sutures.

Pre-medication—Tuinal grs. iii at h.s. Morphine gr. ¼ with atropine 1/150 at 8.30 a.m.

Condition of patient—Temperature, 98.5° F. Pulse, 76. Respiration, 20.

Agents—Spinal anaesthetic, nupercaine 14 cc. 1/1500. Intravenous Pentothal, 2½%-25 cc.

Stimulants — Blood 1000 cc. Oral oxygen, throughout.

Gross and Microscopic Description of Tissues Removed

Tissue No. 1430-2-1 3-4 (Dr. Prendergast), Dec. 3, 1947.

Gross—Gastrectomy—greater curvature shows a roughly oval ulcerative lesion, 6½ x 3½ cm., but contour of raised margin is asymmetrical. Floor of ulcer is only 4 or 5 mm. thick. Serosa is not smooth, but rough and nodular. No grossly involved lymph glands found.

Micro—No glandular structures in this carcinoma; pattern consists of numerous small and large islands of epithelial cells that invade wall down to serosa; much inflammation in stroma; fairly numerous mitotic figures; Grade iii. Lymph glands free of carcinomatous infiltration.

Final Diagnosis

Carcinomatous ulcer of the greater curvature of the stomach.

Progress Notes

Immediate post-operative condition of the patient was good. Pulse, 100. Respiration, 20. Blood pressure, 130/80.

December 3, 1947—As soon as the patient reacted he was somewhat restless. Morphine, ¼ was given as a sedative. Turned frequently from side to side. Continuous gastric suction established. Oxygen per nasal catheter. Carbon dioxide hyperventilation every hour. Blood transfusion 500 cc. and 5% glucose and saline 1000 cc.

December 4, 1947—Continuous suction. Blood 500 cc. and glucose 5% 2000 cc.

December 6, 1947—Amino acids and glucose. Penicillin 50,000 units OH iv. Graham diet started via duodenal tube.

December 7, 1947—Up in a chair for 15 minutes. Liquid stool. Duodenal tube removed.

December 10, 1947—Up as desired. Stitches removed.

December 19, 1947—Post-operative x-ray. There is evidence of resection of the distal half of the stomach. The barium meal passed readily into the jejunum at the anastomosis. Irregular filling defects are seen about the lower end of the remaining portion of the stomach. This is probably post-operative swelling.

At two and four hours: small residues of the meal are present in the stomach, indicating that there is some delay in emptying through the stoma. (Dr. F. G. Stuart).

December 20, 1947—Discharged from hospital.

Condition on Discharge

Patient was discharged from hospital able to take full meals, free of all epigastric discomfort previously complained of. Appetite improved.

Follow-up Notes Since Leaving Hospital

February 2, 1948—Received a letter from the patient, as follows: "I am feeling much better every day. My appetite is good. I have gained 12 pounds since my operation. I cannot eat a big meal yet, so I take small meals often."

January 4, 1949—Gained 14 pounds in past year. Appetite good. Can eat fair sized meal.

September 5, 1949—Letter: Feel good, gained weight. Can eat anything. Occasional discomfort after drinking beer.

March 14, 1950—Progress report very satisfactory. No complaints.

ANAESTHESIOLOGY

Anaesthesia for Transurethral Resections

D. C. Aikenhead, M.D.

Anaesthesia for transurethral surgery is a most interesting procedure as the recipients are in many instances suffering from cerebral, pulmonary, cardiac and circulatory disease. Not infrequently the subject may exhibit to a greater or lesser degree symptoms combining these conditions. Cerebral vascular accidents, coronary disease and emphysema, are perhaps the most common examples of pathologic changes in the three great systems mentioned. Add obesity to a post cerebral vascular accident, plus a healed coronary infarction and you have a patient in the category described by Osler "I smell the rose above the mold this morning." I am introducing a brief history of Mr. X*, suffering from heart block. Despite the fact that so many persons who are candidates for transurethral resection are unfavorable anaesthetic risks the local symptoms of straining at urination, residual urine and bladder infection may so irritate the patient that he is obliged to seek surgical relief.

The pre-operative preparation of the patient is as important as the operation. We might first mention upon our list, mental tranquillity. The patient does not come to the surgeon from desire but necessity. He has discussed his condition with a number of friends. Most likely he has received varying reports as to the worth of the procedure. He vacillates until an acute suppression sends him into the arms of a transurethral surgeon. If the latter will listen carefully to the patient's story, spending some time listening to irrelevant material, he will reap rich dividends in the post-operative period when the subject of a possible revision comes up. Rest is a most important pre-operative item. I do not refer to the public ward patient with his pipe and indwelling cathet surrounded by a group of cronies with similar tastes. He is probably happier in hospital than at home. The busy executive is in a different category. He wants "to get it over with." Many attempt to perform the office work to be lost during the hospital sojourn by burning the midnight oil before entering the hospital. This type of patient and the one who fears to enter hospital benefit markedly by getting acquainted with hospital routine before surgery. Now as to physical condition. It is remarkable to note the change in certain patients who enter the hospital with "one foot in the grave." Peripheral edema, severe cystitis, high blood urea levels, and a low blood count might be mentioned. These people, after rest and suitable therapy, come to the operating room in a changed condition and undergo a transurethral resection with success. As a rule most patients are ready for operation in less than ten days. There is the odd individual who literally "inches" towards recovery. With such people the surgeon would be well advised to wait even months for the optimum moment for surgery despite the pressure from the patient and next of kin to get on with the job. Blood proteins should be near normal, as it has been proven that post operative healing of tissue is delayed with low blood protein levels. If the patient objects to extra protein consumption by mouth, intravenous amino acids products may aid in building up blood protein levels to normal. Varying degrees of bronchitis, bronchiectasis, emphysema and asthma present themselves in these patients. In the presence of moderate to severe degrees of any of these conditions light pre-operative medication is suggested.

Now, after considerable investigation, appraisal and treatment, we find our patient at the maximum, mentally and physically for the ordeal which lies ahead. This time, as we have mentioned, must be carefully fitted to each individual. To me early morning surgery is preferable. It is axiomatic that the patient should rest comfortably during the night. As most hospitals have considerable noise up to midnight the administration of the almost necessary barbiturate to ensure sleep should be withheld till around 11.30 p.m. This medication should carry the patient through until the early activities of the ward begin. Evening sedation at 8 p.m. leaves the patient counting sheep at 3 a.m. One could write indefinitely upon pre-operative sedation. One particular "peeve" is reserved for

*See page 528

the patient awakened from a sound sleep to get a sleeping pill or a hypodermic injection of a cerebral depressing drug. I prefer light preoperative medication in the ward. This should be adjusted to the patient's mental and metabolic physical activity. If extra sedation is required in the operating room it is very easy to use morphine or pentothal intravenously. Our surgeons prefer to have their patients lightly premedication.

Now as to the choice of an anaesthetic agent. An experienced anaesthesiologist may choose a variety of agents which in his or her hands may show little statistical difference. I favor a subarachnoid anaesthetic which I believe to be the anaesthetic agent of choice for transurethral surgery. Certain elderly males offer various physical handicaps to a quick and easy spinal tap. Those which come to mind most readily are obesity, kyphosis, osteoarthritic changes in the lumbar spine. The skin over the lumbar area must be free from infection and this skin area carefully cleansed with ether to remove sebaceous material. Many persons in cleansing the skin make a last grand flourish between the gluteal cleft ending up with possible colon contamination over the site of the spinal puncture. The actual spinal tap is as a rule not difficult using a short bevel No. 19 or No. 22 needle. The latter causes less trauma to the meninges but I find it unsatisfactory with advanced arthritic changes in the lumbar area. A few patients present a back that provides temporary embarrassment to both parties concerned in the spinal tap. The patient must remain quiet. Should he keep squirming as the needle pierces the various dorsal planes I withdraw the needle and have someone administer sufficient 2½% Pentothal solution I.V. to abolish consciousness. If one follows this plan with most "wigglers" the patient will be spared considerable discomfort and the anaesthetist vexation of spirit. I have no experience with the so called Taylor technique using a 12 cm. needle, 1 cm. below and 1 cm. medial to the posterior superior spine.

Of the various drugs to hand one may use a heavy or light solution of Nupercaine, a dilute solution of Pontocain a solution of Pontocain mixed with a 10% glucose, and lastly the drug with the least toxicity, Novocain or Procain. 100 mgms. of Novocain mixed with 2½ cc's of cerebrospinal fluid at L. .4-5 of L. -3-4, should give one hour of anaesthesia. This quantity of Novocain may extend the time to 90 or even 120 minutes, while 60-70-80 mgms. often suffices from 20 to 40 minutes. I believe it is an advantage to the patient to be under the influence of a drug which loses its effect in about an hour. This limits the duration of surgery but I bring forward the suggestion that one hour of surgery is in the main sufficient for these handicapped patients. It is open to question as to whether the transurethral surgeon is as efficient during the second hour as the first. If one grants this proposition it would seem wiser to have a tired surgeon stop the operation as the anaesthesia lightens. The anaesthesia for all spinals is not even. Nerve fibres in contact with Novocain solution do not absorb the drug in equal quantities. One may find a small area in the prostate which on cutting or coagulation causes distress or pain yet apart from this spot the anaesthesia is perfect. Moderate to full bladder distension may cause distress though prostatic anaesthesia is good. Morphine sulphate grs. ⅛ to grs. ¼ (.0081 gm.—.016 gm.) I.V. has in many instances almost a magical effect. Some prefer a ¼% pentothal solution running throughout the operation to control restlessness. I use 2½% pentothal from a syringe as I find it gives me better control over the patient.

For a number of years I routinely gave ephedrin sulphate gr. ¾ intramuscularly ten minutes before the spinal tap. This procedure did not always prevent a moderate to serious drop in the systolic blood pressure. Many patients do not require a vasopressor agent. If the latter is needed I have a tuberculin syringe with 1 cc. of ephedrin (gr. ¼). I inject two or three minims of this solution into the intravenous rubber tubing. Unless the drop in blood pressure is severe this amount of ephedrin is sufficient. The same quantity of the drug may be repeated within three minutes. Methedrine (d-N-methyl amphetamine—3-hydroxoy-ethyl benzene HCL) may be used in similar doses.

It is essential that a blood pressure cuff should be on the arm throughout the operation. Blood pressure readings give the most reliable indication of the efficacy of the circulatory system. An experienced transurethral surgeon can detect blood pressure fall at once by the amount of bleeding at the site of the operation. Almost at any time during the operation the systolic blood pressure may drop to 80 or lower. One should not need the skin pallor, drops of moisture upon the forehead and probably nausea to point out that the blood pressure is low and that the patient needs attention—at once. I like a B.L.W. mask over the nose with a flow of 6-8 lts. of oxygen per minute. This does not increase the oxygen saturation of the red blood cells but quadruples the normal oxygen content of the serum. Increased oxygen in the blood serum is an extra safety factor in any spinal anaesthesia.

After the spinal tap the patient is placed in the recumbent position and the legs placed in stirrups. The prostatic resection may not begin at once due to a narrow meatus or urethral stricture. Urethral strictures so narrows the canal that the resectoscope cannot be passed. The

call comes for "sounds." These instruments are most efficient for enlarging the urethra. Here is where subarachnoid block is in my opinion the agent of choice, i.e., where considerable urethral dilatation is necessary before the resectoscope is passed.

Some delay occurs if the surgeon decides to do vasectomy before he starts his transurethral. This may mean the Novocain will have lost its effect and supplemental anaesthesia will be required before the operation is completed.

Through the courtesy of Dr. C. B. Stewart and Dr. R. Taylor of the Department of Urology of the Winnipeg General Hospital I am indebted for the following statistical information. In a five-year period there were 1,000 transurethrals, 86.1% were benign and 13.9% were malignant. The average age was 67.2 years with the oldest 107 and the youngest 46. The highest B.U.N. was 109 mg. per 100 cc. whole blood to 7 mg. the average B.U.N. was 17.6 before operation. The average amount of tissue resected was 21 gms. with the highest at 107 and a low of lgm. 77.5% left the hospital within three weeks of operation.

The good farmer attempts to return to the soil some of the essential minerals removed during a good harvest. As oldsters show the effect of blood loss during surgery, we try to give sufficient blood during the operation to make up for this loss. The average blood loss for 364 cases of benign prostate was 122 cc's. The highest was 1,250 and the lowest 5 cc's. The average loss from 70 cases of carcinoma was 46 cc's. If there is any doubt about the compatibility of the blood that is started to replace the loss at the operative site, the blood flow should be stopped at once. I need not go into the gravity of post-operative haemolysis due to incompatible blood. An article by C. I. Creevy—Journal of Urology, Vol. 59; June, 1948, may be reviewed with profit.

Of post-operative complications haemorrhage accounted for 4.3%. Cardio-vascular 1.7, pulmonary .8%, including three pulmonary emboli. The mortality in 1,000 cases was 19 or 1.9%, 9 deaths (47.3%) were due to Intravascular Hemolytic Syndrome. Miscellaneous causes accounted for 10 cases. The average time of death following operation was 48.5 days. As an example a chest condition carried off a man of 91 who had a fracture of his hip in addition to his prostate.

For various reasons patients return to the operating room within a few days for a revision of the previous transurethral resection. Should the patient have a second spinal anaesthetic? There is no special reason why he should not. If the operation is under the half hour 1.V. pentothal solution 2½% provides a satisfactory anaesthetic. Many of these patients are edentulous. After a few cc's. of pentothal are given, the flaccid lips and relaxed tongue may produce a cyanotic patient. A pharyngeal airway or a No. 8 curved Magill tube 6 inches in length inserted through either nostril to the base of the tongue will correct this condition. Oxygen at the rate of 6-8 litres per minute insufflated into either the airway or catheter is a must.

An annoying but fortunately not over 3-5% complication is the so-called "spinal headache." The selection of the patient for a subarachnoid block is most important. Individuals who are irritable and exacting before operation, those people who are very fond of reading, persons who are subject to periodic headaches, are better done under some other anaesthetic agent. My impression is that No. 22-gauge needles leave fewer headaches than No. 19. I find No. 22 needles fail in many lumbar taps with arthritic changes. When a "spinal headache" does occur I find that hypertonic solutions of glucose (50 cc's of 50%) or 50 cc's of 25% relieve distress better than any other form of palliative treatment. After use, the syringe and needles used for a spinal tap should be cleaned, put into a tray and autoclaved—ready for use. A busy sterilizer may add sterile debris to equipment that if injected within the subarachnoid space cause irritation to the meninges.

A patient under spinal anaesthesia for a transurethral resection may run along smoothly and then suddenly develop a severe pain over the suprapubic region with a sudden drop in blood pressure. One should think of a punctured urinary bladder with extravasation of fluid into the surrounding tissue. If in any doubt as to this condition a suprapubic cystotomy is indicated. Very occasionally the prostate gland may be so elongated that the resectoscope cannot reach the posterior portion of the gland. As a transurethral operation is unsuitable, if the surgeon decides quickly the same anaesthetic will do for a suprapubic operation.

There were sequelae following this series of transurethral resections. As the subject of sequelae following subarachnoid block is a highly controversial one some of my colleagues may question this statement. I might say no sequelae were noted.

Successful transurethral surgery is a team play, best results being attained when all the team play together. In conclusion I should like to remind all those who serve the patient during his hospital sojourn that any major error on his or her part may seriously reduce the possibility of the patient leaving the hospital by the front door.

To those interested in forlorn causes there is a definite challenge in the relief to be offered by transurethral surgery to the many sufferers from prostatic obstruction.

Case History

Mr. X, suffering from Heart Block.

Mr. G. L., admitted to the Winnipeg General Hospital, December 27th, 1949, age 68, weight 135. Blood pressure 170/100. Pulse 24, Temperature 98°. Heart has a loud systolic blowing murmur—x-ray report "the heart is increased in width, to the right and left, the left ventricle is enlarged, the aorta is slightly elongated with atherosclerosis of the arch"—cardiogram report. "Complete A.V. block, left bundle branch block, low R. in V 4. Tall R in V 5—indicates myocardial damage and left ventricular hypertrophy. Blood: Haemoglobin 77% (12 gms.) W.R. negative, B.U.N. 23, Phosphatase alk. (serum) 7.1%. Phosphatase acid (serum) 2.5%. Bilirubin (serum) trace. CO2 combining power. 63 vols %.

A catheterized specimen of urine gave S.G. 1015, alb. .4%, 10-12 pus cells loaded with rbc's. On 18/1/50 this patient was given gr. 1/150 atropin sulph. by hypo ½ hour before operation. A lumbar tap withdrawing 2 cc's of C.S. mixed with 60 mgs. of Novocain. 8 litres of oxygen was insufflated into the pharynx per minute. After 30 minutes the effect of Novocain began to lessen and 6 cc's of 2½% pentothal solution were introduced through the intravenous tubing. This relieved his anxiety but within 5 minutes he suddenly and without warning ceased to breathe, pupils widely dilated. B.P. nil. Intermittent pressure using oxygen with a Heidbrink machine was started and color returned within 30 seconds but three bouts of respiratory arrest occurred over a period of 5 minutes before regular respirations returned. The transurethral surgeon continued with his work during all this manipulation and stated that bleeding occurred throughout. The patient was returned to the ward without incident and was discharged two weeks afterwards.

ORTHOPEDICS

On Dr. Alexander Gibson's Exposure of the Hip Joint*

Charles Hollenberg, M.B.E., M.D., M.Ch. Orth., Liverpool; F.R.C.S., Eng.; F.R.C.S. (C)

Severe blood loss and difficulty in achieving adequate exposure have made procedures on the hip joint amongst the most serious of orthopaedic undertakings to even the most experienced.

The Kocher approach has now long been abandoned by most of the English speaking surgeons. It has fallen into such disrepute, because of the serious hemorrhage which accompanies it, that the majority of the present day surgeons have never used it and many have never even seen it. It is not surprising that exposure to the hip joint as described by Kocher should be accompanied by most serious hemorrhage. The upper part of the incision goes through the gluteus maximus in the direction of its fibers. The gluteus maximus is a very vascular, massive muscle and has on its under surface a dense network of huge veins. One who has had the opportunity to examine the deep surface of this muscle in the cadaver can see the truth in Henry's analogy to that of the placenta.

The approach to the hip joint devised by Smith-Petersen makes use of Cushing's principle of reflecting muscles on a subperiosteal plane. Even though it is today the most popular approach to the hip, it has many disadvantages. It is time consuming and blood loss is still severe, so much so that it would be a serious omission to do it without giving a transfusion during the operation. This exposure, though better than most, is not a complete one. Smith-Petersen has had to devise instruments of special design to allow him to do the necessary work on the acetabulum for it is not fully exposed by his method and one has to use these instruments for the most part out of sight.

There is no need to mention the many other approaches described.

Dr. Alexander Gibson[1] has recently published a description of the approach to the hip joint which he has been using for the past thirty-five years. To one who has used it there is no doubt that it is by far the best one devised. It embodies two important principles: firstly, that on which all of Kocher's approaches are based, viz., the incision passes between two nerve territories; secondly, separation of structures is begun where there are natural planes of cleavage. This precept was strongly stressed by those brilliant French surgeons, Fiolle and Delmas.

In the issue of the journal in which Dr. Gibson's article appears, Mr. Norman Capener of Exeter, discusses, in an editorial, the method of the approach as described by Dr. Gibson. He has tried it and found it a method of choice. One feels, however, that he is not right when he refers to it as Kocher's approach. Kocher's incision is a bloody one; Gibson's is not. It is rarely that even a single vessel has to be tied throughout the procedure. Furthermore, by dislocating the head of the femur forward instead of backwards, as advocated by Kocher, exposure is made complete. The approach as described by Dr. Gibson differs from any other, even that of Kocher, in that it is safe, expedient, simple, and complete. There is no pro-

cedure on the hip joint which cannot be done through his exposure.

These differences are most important ones. The dangers of referring to this method as Kocher's approach are obvious. Surely there can be no objection to having it called Gibson's approach. It is felt that Dr. Gibson has added something new to the armamentarium of the orthopaedic surgeon.

*Reference: 1, J.B.J.S., Vol. 32-B, No. 2, 1950.

The Canadian Red Cross Transfusion Service

Report and Comments on the Red Cross Blood Bank, July, 1950

	Elective and Urgent				Emergency	
Name of Hospital	Issued	Used	Returned Unused	No. of Transfusions	Bottles Used	No. of Transfusions
Winnipeg General	778	523	255	225	72	13
St. Boniface	366½	208	158½	133	22	5
Misericordia	255½	176	79½	110	23	3
Grace	147	103	44	72	5	2
Deer Lodge	56	39	17	22	4	2
Victoria	29	21	8	14	1	1
St. Joseph's	88	71	17	34	3	3
Children's	22½	15½	7	20	4	4
Concordia	22	13	9	10	...	...
Selkirk General	15	10	5	5	6	5
Others	20	18	2	9	10	8
Totals	1799½	1197½	602	654	150	46

Issued to the Edmonton Depot — 53 bottles.

Comments

Blood consumption remains at a very high level. On the other hand the use of plasma in one of the largest hospitals in Winnipeg during this month is practically nil, this despite the use of large quantities of "universal donor" blood for emergency cases. The present position is that for the next two months it will be impossible with the present donor panel at our disposal to keep up this rate of consumption.

From the Red Cross end the problem is being tackled by steadily working on donor recruitment and by intensified efforts to extend the service to the remainder of the province and western Ontario, thus enlarging the potential pool of donors. This work received a set back of some six to eight weeks owing to the flood and such a set back has been sufficient to upset calculations as far as available donors are concerned during the next four weeks. A secondary donor campaign is planned for the Fall and the aim will be to increase the available donors in the city from the present 10,000 to above 15,000.

Until success attends these measures every bottle is doubly precious and the only short term measure available is for each physician and surgeon to take thought on the prescription of each and every bottle of blood. Furthermore, the relatives and friends of every patient receiving blood or plasma must be actively canvassed as to their willingness to replace in the community bank what has been withdrawn. Given such co-operation the Red Cross Bank can continue to make available for use by the profession more blood than can be produced under any other system, but co-operation must be active. Good wishes are not enough—positive action is needed.

Cecil Harris, B.Sc., M.D., M.R.C.P.,
Provincial Medical Director.

August, 1950.

BOOK REVIEW

Physician's Handbook. This very useful little manual is now in its 6th edition. Its size (7" x 4") makes it convenient to fit the pockets of internes who will find in it a most comprehensive vade mecum calculated to furnish answers to the multitude of questions which may arise on the wards. There is a mixture of terse recording of factual data and informal discussion. There are outlines of general history taking, of examination of the comatose patient, of general physical examination, and of neurologic and psychiatric examinations.

The section on cardio-respiratory examination includes many tables and diagrams and several illustrated pages on electrocardiography with the use of unipolar leads. The section on surgery and obstetrics includes details of pre- and post-operative care, the signs and treatment of complications, etc. There is much about diets and vitamins and infant feeding.

The chapter on Drugs and Hormones discusses briefly all those in common use including the antibiotics with tables of comparative actions, synonyms, etc. There is a chapter on the recognition and treatment of poisons. Parasitology and Mycology are given several pages, and many tables and illustrations. Epidemiology and Skin Tests occupy two chapters. Haematology, Blood Chemistry, Puncture Fluids, Liver Function Tests, Tests of Endocrine Function are among other subjects considered. There is a chapter on how to conduct an autopsy, a long one on Bacteriology and Serodiagnosis and one on Radioisotopes.

The book is so complete and so encyclopedic that it should find a place on every doctor's desk. The style of arrangement is such that the desired facts can be quickly found and instructions are so concise and clear that following them is easy. It is published by University Medical Publishers, P.O. Box 761, Palo Alto, California. Price $2.50.

BOOK REVIEWS

Clinical Examination of Patients with notes on Laboratory Diagnosis by John Forbes, M.D., M.A.C.P., and W. A. Mann, M.D., F.R.C.P., is a 320-page illustrated manual devised to bridge the gap between the academic and clinical stages of study.

There is a chapter on history taking, and another on history taking in abnormal psychological states. The various systems are considered separately, and in each case diagrams, x-ray photographs and laboratory procedures are included. The substance of each chapter is further condensed into a summary which stresses the important points of investigation.

The letter-press is sufficiently complete. Nothing is omitted that should be given. Procedures of technique are set forth clearly. Diagrams and tables render instruction easier. The laboratory sections form a laboratory manual sufficient for the student's needs with abundant illustrations. Taking it all in all the book is neither too large nor too small for its purpose; it is systematic, readable and complete. Published in Canada by the Macmillan Company of Canada, Toronto. $3.50.

♦

Parkinson's Disease, by Walter Buchler, and published by him at 101 Leeside Crescent, London N.W. 11, is a self-help book written by a layman for fellow sufferers. The author relates his own case, tells of his search for cure and mentions the remedies he has found most helpful. The essence of the book, however, is his story of how he has made life tolerable for himself. He mentions many little practices which mask his disability and permit of mingling without embarrassment with others.

The degree of handicap which a disease produces can be greatly modified by the determination of the sufferer. The patient who accepts his disability and then proceeds to employ his remaining faculties can enjoy a full life. The author does not allow his infirmity to overcome him but lives a planned day of usefulness. Now that we are able to give much medical help to these patients it is well to stress how much they can do for themselves. This little book, therefore, is a useful one to put in the hands of sufferers from Parkinson's Disease. The price is $1.00.

♦

For generations the "Students' Aid" Series has been popular with medical students. These small, inexpensive volumes are almost complete textbooks, between whose covers has been compressed all the essential data of the subjects considered. Each volume is an authoritative compendium and affords an excellent method of quick review.

♦

Aids to Histology, by Geoffrey H. Bourne (158 pages, price $1.00), is of special use to those who are studying this subject. It serves to emphasize the important facts in a clear manner.

♦

Aids to Surgical Anatomy is by J. S. Baxter, now of Bristol, formerly of McGill. (203 pages, price $1.00). It follows the usual line of such books and has a number of useful illustrations.

♦

Aids to Medical Treatment, by T. H. Crozier (440 pages, price $1.45), is of use not only to students but to practitioners who wish to have by them concise, easily found instructions on treatment. It includes disorders of every system, a chapter on the new remedies and many diets.

OBITUARY

Dr. W. J. Gunne

Well and favorably known to many Manitobans, the veteran doctor of Kenora, Dr. W. J. Gunne, died at his residence on August 16 in his ninety-first year.

His first years of practice were spent in Carberry, then in Glenboro where he married Miss Livingston in 1888 and a few years later moved to Rat Portage, as Kenora was then called. He was the Canadian Pacific Railway surgeon for over fifty years and a leading citizen of the resort town.

He is survived by his wife, three children, one of whom is Dr. L. G. Gunne of Lac du Bonnet; two daughters, six grandchildren and seven great-grandchildren.

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Current Clinical Meat Feeding Studies

REPORT No. 5

EFFECT OF MEAT IN THE DIET OF A LARGE GROUP OF INSTITUTIONALIZED CHILDREN

This study was established to investigate the effects of including Swift's Strained Meat in the infants' diet for periods of at least a year in length. Numerous observations have been made and the results are being tabulated to obtain information on the relationship of dietary meat to growth, blood composition, incidence and severity of infections, and general well-being of infants.

This study is part of an extensive clinical research program now being conducted through grants-in-aid made by Swift's.

Medico-Historical

The Medical Life of Henry the Eighth*

Lyon H. Appleby, M.D., F.R.C.S. Eng.,
F.R.C.S. Canada
Vancouver, B.C.

The medical life of Henry VIII cannot be divorced from a consideration of his kingship and of his times, nor can he be considered apart from his fellow monarchs, their courts, intrigues, love affairs, hopes and disappointments.

Henry was part of the Reformation, a movement which was European rather than English, but England was caught in its whirl, and many things attributed to Henry are merely British manifestations of a wide-spread movement, and, as such, in many instances inevitable.

Let us consider briefly the condition of England during the lifetime of Henry VIII, embracing the latter part of the fifteenth and the first half of the sixteenth centuries:

Henry's rule began amidst perplexities, anxieties and embarrassments. The nobles were ambitious and divided into cliques. The people were poor, dispirited, unimportant and distracted by the claims of two hostile religions. Scotland was convulsed with factions. Ireland was barbarous and in continuous rebellion. The people generally were rude and uneducated, the language undeveloped. Education was chiefly confined to nobles and priests. The poor were oppressed by feudal laws. No great work in English history, poetry or philosophy had yet appeared. The comforts and luxuries of life were scarcely enjoyed, even by the rich. The people slept on mats of straw, ate without forks off pewter or wooden platters. Tea and coffee were unknown and beer was the national drink. The houses, straw thatched, were dark, dingy, ill ventilated, uncomfortable and unsanitary. Commerce was small. Manufactures were in their infancy. Coin was debased and money was scarce. Trade was in hands of monopolists. Coaches were almost unknown. The roads were impassable, except to horsemen, and were infested with bandits. Wheaten bread was a luxury. Agriculture was a mere scratching of the surface and implements were crude and primitive. Enterprise of all kinds was restricted within narrow limits. Beggars and vagrants were so numerous that the most stringent laws were required to protect the people against them. Profanity was universal. Capital punishments were frequent, public and revolting in character. The parochial clergy were ignorant and sensual. Sports were rude, cruel and dangerous. Fox hunting was the highest ambition of the county squires. Postal deliveries were costly and required days to reach the home counties. The population was about three million. Britain as a power was just being born. Such was Merrie England in the time of old King Hal: a rude nation of feudal nobles, rural squires and ignorant people, who toiled for a pittance on the lands of cold, unsympathetic, pleasure-seeking masters; without books, schools, privileges or rights, except the right to breathe the common air and indulge in coarse pleasures, religious holidays and village fêtes.

It was, however, an era of awakening. The times produced an amazing pageant of illustrious names. Columbus, with the fleet provided by Isabella of Spain, had just discovered America. Copernicus lived at this time, and his work of mapping the heavens and the perfection of the compass, marks the end of an old and the beginning of a new epoch. Leonardo da Vinci is painting his "Last Supper" and "Mona Lisa." Michael Angelo, immortal for his sculpture, painting, poetry and architecture, is living at this time, his contemporaries being Titian, Holbein, Botticelli and that brilliant scholar Erasmus, a frequent visitor and friend at Henry's court. Cortez has conquered Mexico and poured her gold into Spain, making that country rich and powerful and a menace to every other crowned head in Europe. Ambrose Paré is revolutionizing surgery in Paris. The great Linacre, physician to Henry VII and Henry VIII, Mary Tudor and Prince Arthur, is founding the Royal College of Physicians (1518). Machiavelli, historian, statesman and man of letters, is making his presence felt. Martin Luther is preaching his doctrine of Protestantism in Germany. Calvinism is spreading in France. Vesalius is shortly to publish his famous work, "De Fabrica Humani Corporis." He is the most commanding figure in European medicine between Galen and Harvey. The anatomy of the times was still the anatomy of Galen. "De Fabrica" exposed the teachings of Galen as representing the anatomy of animals rather than human beings and he was bitterly assailed. His old teacher Sylvius turned against him, but his work was carried on by his pupil, Gabriele Fallopio. Vesalius, however, completely disposed of the Galenical tradition of a five-lobed liver, the double bile duct, the horned uterus, etc. Eustachius, a contemporary, bitterly opposed him. Vesalius died in obscurity. His work, however, stimulated Henry to permit four human dissec-

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1 Who mutilated himself.

tions, the first ever allowed in England, and it was a medical feather in Henry's cap.

Such was the Europe of Henry VIII. To consider him, one must consider his times and the great forces with which he was surrounded.

One must also attempt to understand the thrones of Europe at that time. It is an age of dynasties, with each monarch a dynast. The great Maximilian, at the time of Henry's birth, is in Germany, head of the great Holy Roman Empire, neither holy, Roman, nor yet an Empire. Ferdinand and Isabella are in Spain, riding to power on a wave of Mexican gold, fighting their Moors and plotting for the conquest of Europe. Louis is struggling between these two to preserve France against them, and from the European invasion of the terrible Turk. Henry VII, founder of the Tudor dynasty, is sitting in a precarious position in England, ready to murder at the first sign of Pretendership. The Holy See in Rome is corrupt and usurious, divided in itself, yet all-powerful in Europe.

What of the children of these dynasts with whom we are chiefly interested and of whom Henry was one? These princely children were mere pawns in the great game of dynasties, mere rivets in the building of Empires; impersonal, pampered merely because of their usefulness in creating alliances which might be useful, or increase a country's power or prestige. The choice of a life mate was the will of the parents. Love or personal inclination had no place. Early betrothals, marriages of a shocking juvenile character were propagated in the holy name of state expediency. Henry VII, Maximilian, Ferdinand and Louis are in their era to be likened to the beef, steel, coal and automobile barons of America in the late 80's, the founders of great empires, fortunes and powers. Artillery is displacing Latin, the yeast of the printed word is spreading. Italy is the target, the spices and precious stones of India, the gold and fisheries of America, the prize. The children of such dynasties were, as I have said, regarded impersonally as mere pawns. Princes did not marry for love, they took wives only to beget children. Good health and breadth of hip were more important than accomplishments or beauty. Such children were taught, and absorbed from their mother's milk, the idea that this was their mission in life, and many of the crimes and brutalities attributed to Henry, were in reality an outgrowth of his incapacity to procreate a living, healthy male heir to the Tudor throne. Without an adequate understanding of the times, the European dangers which beset him, the all importance of dynastic perpetuation, we cannot understand Henry, and with this brief review we return to Henry in the words of Maurice Thompson:

"There lived a Knight, when Knighthood was in flower,
Who charmed alike the tilt-yard and the bower."

Henry was born in 1491, the second son of Henry VII. His position was not important, as Prince Arthur, his elder brother, was heir presumptive to the Tudor throne. Henry was a healthy boy, a strong, overgrown, rosy-faced boy such as we all know; but from the very first headstrong, dominant, self-willed yet ductile, highly petulant, fond of music and outstanding in athletic achievements of his day, the pride and joy of the Court, a splendid dancer and raconteur, he yet was not taken very seriously. His brother, Arthur, heir to the throne, was a weakling, obviously consumptive, and Henry in consequence was carefully groomed in the school of dynastic responsibilities to provide against the contingency of Arthur's death. Arthur was betrothed to Catherine of Aragon, daughter of Ferdinand and Isabella of Spain, the most feared monarchy in Europe. When he was barely fifteen and Catherine just fifteen, she set sail from Spain to marry Arthur. Henry, at this time was only ten, and he it was who was dispatched, along with the escort of honour, to bring Catherine through England to London. Henry was very gallant and made quite an impression on the heavy, somewhat morose Catherine, and helped make her early days in England pleasant. Arthur and Catherine were duly married, uniting the thrones of England and Spain, but on account of their youth and Arthur's weak chest, it was decided at first that they should not live together. However, this was not carried out, as they spent their bridal night together and lived together in the Palace at Ludlow for five months, when Arthur died. Arthur has left only one sentence to posterity, but it has probably caused more trouble than any sentence ever uttered. We shall hear a great deal more of its effects later. The morning following the marriage ceremony, Arthur pushed his head through the draperies of the bridal bed and said, "Marriage is a thirsty pastime, last night I was in Spain." The statement is on record, and is Arthur's only recorded statement. Indirectly it led to the divorce of Catherine of Aragon, a quarter of a century later, the break of England from the authority of the Holy See in Rome, the establishment of England as a Protestant country and the establishment of the Church of England, with the usual roaring conflagration of anarchies, beheadings, cruelties, brutalities, intrigues and perfidies, incident to a holy war.

The death of Arthur was a national tragedy. The link with Spain was broken. Catherine's dowry was still but half paid and Henry VII stood to lose heavily. Young Henry was now heir presumptive and Henry VII, fearful lest some mishap

should befall him, tried to marry almost every marriageable dynastic pawn in Europe in the hope of procreating a second son, a reserve, so to speak. But Henry was now old, crabbed, pock-marked, dissolute and impotent. Still this did not deter him. An interesting item from the standpoint of modern eugenics is that he tried to marry Mad Juana of Spain, insane or not, "since they have been assured that her derangement of mind would not prevent her bearing children." England's friendship was to be preserved, even at the cost of possible half-wit children. But death alters everything. Shortly afterwards, Isabella of Spain died and Catherine was no longer the prize she had been. No longer was she the daughter of a ruling dynast and the next few years were miserable for her. A veritable prisoner in England, no longer wanted, her dowry unpaid, in a foreign country, the story of Catherine's life at this time evokes our sympathy. Seriously ill with quartan malaria, her lot was not enviable. The one bright spot was the gallantry of young Prince Henry, who was always good to her. Gradually it became evident to Henry VII that he was not a matrimonial bargain. No one wanted to marry him. The only thing left was to betroth Henry and Catherine. But to a world intensely Catholic, there stood an obstacle which at first sight seemed insurmountable, the Book of Leviticus: chapter 20, verse 21: "And if a man shall take his brother's wife, it is an unclean thing: He hath uncovered his brother's nakedness: They shall be childless."

Was Catherine a virgin? Had the weak, juvenile, consumptive Arthur been able to consummate the marriage? The statement of Arthur was on record. How to get around it! And here we find as fine an instance of medical cupidity as could be found in any modern court, involving a conflict of medical opinion. The bishops and the court physicians examined Catherine and flagrantly declared, with commendable insouciance, that she was "as intact as the day she left her mother's womb." Catherine, white-faced, true to her dynastic traditions, said nothing. One feels that if necessity had decreed otherwise, Catherine would have been declared a relaxed multipara. One cannot help but wonder whether the great Linacre, founder of the Royal College of Physicians and Court physician at that time, may have been a party to this duplicity. Henry was betrothed at the age of twelve to the eighteen-year-old Catherine of Aragon.

During the next few years, Henry grew up like a real modern boy. Profligate, headstrong, licentious, undoubtedly powerful, robust and a brilliant athlete, he was the envy of the tilt yard. At jousting, wrestling and riding he had no peer and the myth of his personality started growing: and he started trying to live up to it. Six feet, four inches tall, tremendously powerful, mentally he was not neglected. He was well versed in Spanish, French and Latin, and thoroughly trained in statescraft. The old king, crafty, penurious and miserly, held England in a vice-like grip, exacting tribute drop by drop, beheading every possible aspirant to the throne and niggardly in the spending of money, ravaged by advanced tuberculosis, finally died in 1509.

Henry was now a boy of eighteen. His succession to the throne opened the flood gates of his father's treasury and he became immensely popular as the money began again to circulate. He and Catherine of Aragon were married and the next few years were given up to pageantry, pomp, tournaments and a war with France, because Henry felt he must show his kingship and power, although the war was entirely unprovoked.

In 1511 Catherine, after two previous miscarriages, gave birth to a male heir, which died in six weeks. When this was followed by one miscarriage after another, abortion followed abortion, Henry began to worry about the book of Leviticus: "They shall be childless." No greater curse could be visited upon a dynast. Could this be a visitation from the Almighty, a punishment for the crime of incest in marrying his deceased brother's wife? Medical opinion in modern times would be inclined to take a different view concerning the aetiology of these repeated abortions and miscarriages.

Let us turn back the page a little. Henry was in France, busily engaged in a war of splendour, the "Battle of the Spurs," where he fell sick of a fever. When he returned to England, his illness is described as febrile, with pustules and eruptions over the body, from which, in a few weeks, he recovered. Later, an ulcer broke out on his leg, which remained a source of trouble all his life. It is described sometimes as a fistula which would close over and there would be great pain, and when the fistula opened the fever and pain would disappear. What are we to say of this suspicious illness? The abortions of Catherine, the cutaneous eruptions, the intractable ulcer with its mixed infection and underlying periostitis and probable sequestra, the subsequent illusions of grandeur, could only be syphilis. What do we know of syphilis at this time? By many it has been declared that syphilis was brought to Europe twenty-five years before by Columbus' crew on their return from America. Undoubtedly the disease was first called syphilis long after Henry's reign. It really gets its name from Syphilus in the Latin poem by the Italian physician and poet, Fracastoro, 1483-1553.

The question is: did syphilis exist prior to Columbus? Syphilologists record that Hoan Tai mentions it in Chinese writings of 2637 B.C.

Japanese historians state that a disease which could only be syphilis is recorded by them thousands of years ago. The Hebrews were familiar with it, and many lepers were probably syphilitic. In 1250 A.D. a Dominican monk, Theodoric, wrote on the Malum Mortuum and recommended mercury inunctions for its cure. In Henry's time the disease was recognized under various names: Neapolitan disease, French evil, or Morbus Gallicus. The probable explanation of the tremendous wave of syphilis which spread over Europe during the time of King Henry and which was considered a new disease, is that Columbus brought back a new strain of spirochaete which acted much like the new strain of influenza virus about 1918, and that syphilis, like influenza, had existed for generations. Columbus in later years had obvious syphilis and died of it. In any event, Henry contracted syphilis and much of the subsequent brutality of his reign must be attributed to it. Just when or where he contracted the disease is not clear, but in later years when his condition was well known and the downfall of Wolsey was imminent, the rumour circulated that Cardinal Wolsey had given Henry syphilis by whispering in his ear. What he said is not recorded. Wolsey, however, had several healthy, illegitimate children and there is no reason to believe that he ever had syphilis.

Henry's concupiscence continued to grow, his pleasures became more and more lewd. Lechery, nympholepsy and conquest became the order of the day. Poor Catherine did her best: abortion followed abortion, miscarriage followed miscarriage, premature birth followed premature birth. Her only living child, Mary Tudor, was an obvious congenital syphilitic. As she grew up her face was old, scarred, with patchy hair, areas of alopecia, square head, protruding forhead, frontal bosses, all evidences of interited lues. She had extremely bad sight, undoubtedly due to interstitial keratitis. Her subsequent marriage to Phillip of Spain, her own abortions, her early death of cerebral thrombosis at the age of forty-two, make too plain a picture to be denied. Poor Catherine: As Kemble says, "she had been practically the whole of her child bearing life in that condition in which every wife should be who loves her lord."

About this time Henry began to develop illusions, surrounded as he was by obsequious courtiers whose life was devoted to flattery, whose sole object was to aggrandize Henry in his own sight. The court favour-seekers, like village curs, barked, not for reason but because their fellows do. Consider even the great Erasmus in a communication to Henry: "Who is more dexterous in war than Henry VIII? (Henry had never shown any particular military aptitude). O Bosom truly Royal, O worthy mind, worthy of a Christian Monarch, although no King is better furnished with the means of war (Henry was broke), yet you apply all your study, all your powers, to make peace of the world." Little wonder that Henry developed ideas of grandeur. He developed an overweening vanity and ideas of grandeur beyond belief. In speaking to the French Ambassador, he says of Francis, with regard to the possibility of Francis invading Italy, "His dread of me, lest I should invade his kingdom, will prevent his crossing the Alps. My belief is that if I choose, he will not cross the Alps, and if I choose, he will cross." Hardly had these words been uttered than word was brought (and in those days information travelled slowly) that Francis had already crossed the Alps and had conquered Milan. Henry was chagrined and humiliated. Francis completed the famous concordat with the Pope, allying the Holy See and France, a plan which was soon to wreck Henry's bill of divorcement from Catherine, as the Pope, now safely allied to France, no longer feared Henry.

To digress slightly, about this time insanity was rife in England and a strange new madness is recorded: "these slovenly menials who think they be kings"—surely as succinct a description of G.P.I. as one could obtain, incorporating moral and physical degeneracy as it does with ideas of grandeur. To control the rising tide of insanity the Monastery of St. Mary's of Bethlehem in London was converted into the first hospital for the insane. The term Bethlehem degenerated into Bedlam, from which our modern word is derived. All too soon Bedlam was living up to its name.

Henry was now determined to rid himself of Catherine and instituted divorce proceedings, which, however, could only be sanctioned by the Pope. Henry's claim was that Catherine's failure to produce an heir was a visitation and punishment on the incestuous nature of his marriage, and he petitioned to have the marriage annulled, piously quoting the 20th chapter of Leviticus. He claimed the incestuous marriage had crept too near his conscience. The fact of the matter was that his conscience had crept too near another lady, one Anne Boleyn. Henry depended on Wolsey to get him this divorce and Wolsey's power was ubiquitous. No man's pie was free from his ambitious fingers. For six years the struggle with Rome continued, the Pope vacillating and Anne Boleyn shrewdly refusing to yield to Henry's amorous overtures. The desire to possess Anne became an obsession with Henry and he moved heaven and earth to sway the Pope. Anne Boleyn's refusal to accede to Henry's sensuous advances is an interesting psychological study and probably won her the throne. Many a modern girl has won a home through chastity with the victim of her intentions,

and limitless profligacy elsewhere. Man desires, as a rule, what is difficult to attain.

To digress again: Henry's physical prowess was undiminished, his strength was proverbial. No man could stand against him in the lists. But his moral courage was not quite so evident. About this time a severe epidemic of sweating sickness broke out in London. The disease was rapidly fatal in twenty-four hours and Henry was mortally afraid. Plague was also prevalent, though we are still over one hundred years ahead of the Great Plague. But with Henry's friends dying all around of sweating sickness, our hero quickly packed up and fled to the country, discreetly leaving Catherine in London. Sweating sickness is a disease of filth, apparently still present, or at least still described in Osler, and is indicative of the sanitary conditions of the times. Henry's leg began to cause increasing trouble. Sir Thomas Butts was in despair. Butts was Royal Physician at the time, the only physician mentioned in Shakespeare, and the first to be knighted for medical services, for, although Linacre had been knighted, it was as a philosopher and scholar. Butts is the first medical knight. Henry became intensely interested in ointments, liniments and potions, and with the court apothecary, Culpepper, whom he was later to behead, concocted many ointments which read like an old Chinese pharmacology: ground tigers' teeth to give strength, ground pearls, costly spices, incense, etc., to drive out the moist humours which had got into Henry's leg. Not content with trying these on his own leg, Henry practised upon all and sundry whom he could persuade to try his ointment, and "The King's Own Plaster" was for sale throughout the land.

The weary struggle for divorce continued for six years. Henry was furious to think that anyone, be he Pope or Sovereign, would not yield to him. About this time, evidence of Wolsey's duplicity reached Henry. Wolsey had been trying to get for Henry the Pope's sanction to the divorce, but a letter, revealed to Henry, showed he had actually advised the Pope against it. This marked the downfall of Wolsey, the break with Rome, the establishment of Henry as head of the Church in England, the rise of Thomas Cromwell and the appointment of Cranmer as the Archbishop of Canterbury. Anne Boleyn, seeing victory assured, yielded to Henry's amorous overtures and Catherine of Aragon was divorced and the marriage officially annulled on the basis of its incestuous character. It is strange that after living with Catherine twenty-four years the incestuous nature of their union should seriously start to worry Henry about the time that Catherine ceased to menstruate. But Henry had failed in his mission as a dynast. There was no heir. Catherine too had failed, though through no lack of industry and no fault of her own, and she knew she had failed. The date of Henry's marriage to Anne Boleyn is not clear. It is recorded in March, but by some chroniclers it is set back as far as November, probably in deference to Anne's already protuberant abdomen.

At this time Luther was rising in Germany. The Reformation was under way. Cromwell and Cranmer in England were disciples of the post papal Catholic Church in England. Anne Boleyn was directly responsible for the break with Rome. Prince Arthur's naive remark twenty-five years before, indirectly the excuse for the break. England was still Catholic, but no longer Roman. Once Henry's unrequited love had been sated, he ceased for a time to concern himself much with religion. The work of the Reformation was quietly pushed forward by Cromwell and Cranmer. Wolsey died in Leicester Cathedral on his way to London and his death unquestionably saved him from being beheaded.

There is a point in Henry's mental make-up which was here revealed, which shows, to some extent, his peculiar psychology. He had broken with Rome in order to marry Anne: the only way he found he could possess her (and this was the first amorous reversal of his life), using as an excuse the incestuous nature of his marriage to Catherine, and undoubtedly in mortal terror of the curse of Leviticus, "they shall be childless," yet the next day he married Anne Boleyn, whose mother, Lady Boleyn, and whose sister Mary, had in earlier days been his concubines. There is even some suggestion that Anne was his own daughter. So Henry purified his soul by divorcing Catherine and plunging from a legally incestuous marriage into one which, if not legally so, in the eyes of God and the book of Leviticus, was even more incestuous than his previous one. But Henry artlessly failed to see this. Mary, his own daughter by Catherine, naturally was illegitimatized by the annulment of Catherine's marriage, and she was subsequently treated very harshly and bitterly, being deprived of her father's presence, and grew up morose, saddened and bigoted, devotedly Roman Catholic, a fact which was to lead to bitter revolution in her subsequent attempt, as Bloody Mary, to overthrow the early fruits of the Reformation in England.

On September seventh, Anne was delivered. In spite of the assurances of soothsayers, sorcerers, astrologers and physicians, the child was a girl. She was named Elizabeth and destined to lead England to power and heights never before reached and to lay the foundations of our mighty Empire. Was Elizabeth the daughter of Henry? Had Anne, in her shrewd refusal to be Henry's mistress for so long, preserved her integrity against other lovers? Was she likely, with victory so close

at hand, to jeopardize her chances by cavorting with someone else? Dean Inge believes she was not Henry's child. She, at least, was healthy, not syphilitic like her sister Mary and as all Henry's children had proved to be. In the light of Anne's subsequent nomadic cupidity, I cannot but believe that she, ambitious to secure her position, and believing as she did that all was not well with Henry, deliberately yielded herself to one of the multitude of willing courtiers and that Elizabeth was not Henry's child at all. However, conceived as she was out of wedlock, she was born beneath its holy benediction. But Anne was soon to begin showing the same unhappy faculty of aborting as had characterized her predecessor, and she became somewhat of a nymphomaniac, or is reputed to have so become. She is even reputed, during her puerperal state following the birth of Elizabeth, to have seduced one of the court nobles, and she was accused of incestuous relationship with her own brother. The net was tightening around Anne Boleyn and unwittingly drawing it tighter was a young girl of seventeen, Jane Seymour by name, with whom Henry had been dallying for some time. Anne knew this, but she had to close her eyes to the chagrin and humiliation of Henry's contemptuous infidelity. And so Anne was accused. The shoe, however, fitted only one foot, while Anne's cupidity was to cost her her head; with the shoe on the other foot, Henry was free to inhale the fragrance of such extra-uxorial pastures as his amorous browsings led him to frequent.

Anne was summarily tried in a Court packed against her, headed by the Duke of Suffolk, her own uncle. The evidence had been prepared by bribery, the rack and the fear of Henry's vengeance. She had no chance. With a single flash of steel, her beautiful head was divorced from her body and her life from Henry's. Her brother was similarly executed, although the only thing proved against him was that he had kissed Anne during her puerperal convalescence. If there is one really brutal blot on Henry's character, it is the murder of Anne Boleyn. Her infidelity has never been substantiated by historians.

Next day Henry married Jane Seymour, a blood relation and another incestuous marriage. Henry was now forty-six, Jane Seymour, eighteen. Within sixteen months Jane was delivered of a sickly, male heir to the throne of the Tudors and Henry was happy. Within two weeks Jane died of puerperal septicaemia. Childbed fever remained a smudge on the tapestry of medical history right down to the advent of Lister.

But now a great change comes over Henry. No longer is he the swash-buckling cavalier. He is visibly slowing up. From a medical standpoint this period of his life is most interesting. His leg began to give increasing trouble. He became very sedentary, ate voraciously, took little exercise and his weight increased enormously. The closure of his fistula led to innumerable fevers, relieved by the opening of the fistula in the old ulcer. Mentally he became much more retarded, fading more and more into the background, afflicted with the most furious rages. He began to have the most violent headaches, lasting days at a time, throbbing in nature, affected by exertion and undoubtedly due to a rising blood pressure. Ideas of his own grandeur began to obsess him. He was not a king, but King of Kings. Affairs of state gradually passed into the hands of Cromwell and Cranmer, who, both of anti-papal natures, furthered the separation from Rome and widened the breach. Catherine of Aragon died, heavy, pale and dropsical of cardiac failure and cirrhosis of the liver, whether of specific or malarial origin, or both, is unknown. Her daughter Mary was thrown back on Henry's hands. He forced her to repudiate, by word of mouth, her allegiance to the Pope. This she did, after special Papal dispensation permitting her to do so for the sake of peace, though she meant no word of it. Henry during this time appears to have lost all appetite for the beautiful ladies of the court, excusing his developing impotence and past concupiscence by stating that it was only a son he wanted and that he was not really nympholeptic. It appears that at this stage he was really trying to be good, but he was neither an Adonis nor an Origen[1].

Henry's abdomen became enormous, a developing cirrhosis became painfully evident, and the story of his amours would probably have ended here had it not been for two things. Cromwell was ambitious, and several rumours reached Henry concerning the gossip in the court, that Henry was no longer potent, that his rivers of virility had run dry. What! Henry burned out? Henry no longer able to procreate? He would show them. Henry's colt's tooth had evidently not yet been wholly cast. Cromwell suggested several possible dynastic marriages, finally recommending Anne of Cleves, sister of the young Duke of Cleves, who had integrated several of the border states of Savoy, Flanders, Luxemburg, Burgundy and Lorraine. Cromwell thought such an alliance might give him a wedge against France and Germany, but Henry was suspicious and sent Holbein to Flanders to paint her portrait that he might see what he was getting. Eventually and quite apathetically he agreed on the marriage with Anne of Cleves. Holbein had done his work well.

When Anne of Cleves arrived, Henry went to meet her. She had apparently been grossly misrepresented to Henry. She was dull, ugly, bovine, heavy and unattractive. It is said that the marriage prospect had been so distasteful to her that she had with deliberation made herself as

ugly and awkward as possible. Henry rushed out, blind with rage and fury, heaping blame, censure and vituperation upon everyone, shouting "Cromwell has brought me a Flanders mare." Holbein managed in some way to save his head, but Cromwell was within a year to be beheaded. Strangely enough, just one hundred and one years later, a descendant of this very Cromwell was to roll the head of an English Sovereign in the dust. Whether or not Anne was as ugly and bovine as she has been depicted is not clear; certain it is that she was by no means Junoesque. Henry did, however, marry her, but the marriage was never consummated. In consequence, of all Henry's wives, Anne of Cleves is the only one whom I should have expected to have given a negative Wasserman. But there were other reasons why Henry was displeased with Anne. The earlier jokes and twittings of Henry on the subject of his waning virility had again whetted his appetite and he refused to allow the sap of reason to quench the fire of his passions, and had already, before Anne arrived in England, started a furious love affair with a young nineteen-year-old girl of the court, one Katherine Howard, and Henry once again allowed himself to be flayed by the whip of instinct. His treatment of Anne of Cleves was extremely generous, her settlement princely and her divorce prompt. Rather hard on English taxpayers, but very satisfactory to Henry.

But what of Katherine Howard? Young, pretty and flighty, she had caught Henry's fancy. A confirmed nymphomaniac from the age of twelve, one cannot help but feel that Henry was spurred into this marriage by the jests of the courtiers. The wedding was duly solemnized, but Henry was either wilfully blind or extremely doddering not to have known what Katherine was. Her cupidity was already famed, yet Henry, rapidly slowing up, seemed to be very happy with her. His life became more and more sedentary, his belly more and more ponderous, his legs more and more troublesome. Goaded and twitted again by the courtiers with his developing impotency and physical incapacity, he embarked on an entirely unnecessary war with France. The sails of his ship were of cloth of gold, the personal aggrandizement of our hero was lavish. Everything glittered with gold to exhibit the personal glory which was Henry's; yet when the French fleet hove into view he fled his ship and sped to London, discreetly excusing himself by quoting freely from the Book of Deuteronomy. Calais was captured at the cost of an impoverished England. Henry now rested on his laurels, leading the most sedentary life; over-eating, over-drinking, over-indulgence were steering him for the break which was soon to come. Katherine's cupidity was boundless and shameless, and she seemed to feel that if her amours were not actually perpetrated in public, concealment was unnecessary.

Katherine was never pregnant, probably due to gonorrhoea at the age of thirteen. She finally became entangled with one Thomas Culpepper, with whom she fell in love and succeeded in seducing. The news was conveyed to Henry. This marks the complete breakdown of old King Hal. He broke down and wept like any child. I do not think that he minded so much the lechery of Katherine, but her excuse that he was old and impotent and unable to satisfy her was gall and wormwood. He, Henry, King of Kings, Emperor, Defender of the Faith, to be so humiliated. From this humiliation he never recovered. But he was still master of the situation. There was still the Book of Ezekiel to fall back upon: 23rd chapter, verses 22, 37 and 48; "Thus O Oholibah, thus saith the Lord God. Behold I will raise up thy lovers against thee from whom thy mind is alienated and I will bring them against thee on every side. And the company shall stone thee with stones and dispatch thee with swords, thus will I cause lewdness to cease out of the land, that all women may be taught not to do after your lewdness." Remarkable words to be quoted by the Prince of lovers. Henry was as good as his word. Every courtier who had been even remotely associated with Katherine was empanelled against her. Even her boyhood lovers, one of whom confessed to spending a hundred nights with her during her salad days. And so the sword fell, and in reviewing the history of Katherine, I can only say that in my humble opinion "it served her damn well right, sir." Culpepper, with whom Henry had concocted so many weird unguenta, lotions and potions, suffered a similar fate.

Henry was now, however, a broken man. He was fifty-one and had swollen to a prodigious size. It has been said that a good wife subserves three functions: She is the young man's mistress, the middle-aged man's companion and the old man's nurse. Henry had somewhat reversed the order. Boleyn, Seymour and Howard had been his mistresses, Catherine of Aragon both mistress and companion, and his nurse was yet to come.

A year or so following the execution of Katherine Howard, Henry was to get his nurse, and truly he now needed one. Katherine Parr, already twice widowed, found favour in his now lustreless eyes. Freed from past encumbrances, the Book of Leviticus no longer worried him, though he had broken from Rome and proclaimed himself the head of the Church in England. His church was still Catholic and he lived and died Catholic, though no longer Roman. But as the head of the Church and its High Priest, the Book of Leviticus had prescribed certain rigidities in the matter of marriage: "and he shall take a wife in her virginity. A widow, a divorced woman, a profane or a harlot, these shall he not take, but

he shall take a virgin of his own people to wife"—Leviticus 21, verses 13 and 14. Leviticus was again a matter of expediency rather than faith. Katherine Parr, able to view in retrospect the long corridor of Henry's past marriages, marked already by five mile-stones, two of them red with the blood of murder, two black with the taint of divorce, one stained with puerperal fever, and the whole liberally dotted with the intervening yardsticks of amours, concubinage, mistresses and wantons (for Henry had been very catholic in his loving), ladies of the court, tavern wenches, gutter doxies and the merest trulls had all been her predecessors. She herself, gentle, learned, dutiful and infinitely tender, nursed him to the end. What of the end?

It is a long vigil of Katherine's, punctuated by hours of hot fomentations to his leg. The other leg broke out. Repeated cauterizations, until his chamber became so foul that visitors were excluded. His weight was now some 39 stone, over 400 pounds. His abdomen, huge, dropsical, swollen and distended. He presents a picture of advanced hepatic cirrhosis. He was no longer able to eat. In his early days a gourmand, he could eat (like an Og) but in the words of one authority, "today a pot of Rhenish and a pair of pickled herrings set him to belching like a fishwife full of beans." Furthermore, he became subject to colic following his food, and it is possible that the Royal cholesterin had crystallized and precipitated. A modern cholecystogram might have made diagnosis easy. His colour became that of putty. His skin cracked with oedema and his tongue became too large for his mouth. Moving him about became actually a matter of block and tackle. His mind, so brilliant in its youth, so unstable in middle life, never really failed him. Some of his last orders were extremely cruel, the order executing the old soldier Norfolk had to be signed with a rubber as he could no longer raise his oedematous arms. Yet his mind was clear. He is said to have died of uraemia. But a swollen body and an undulled intellect spells cardiac rather than a renal death and I should have expected his urobilinogen to have been more proportionally increased than his non protein nitrogen. And so Henry died. His body burst open after death, so it is said.

To the average school girl King Henry VIII is the man who had a dozen wives and murdered them all. To the average woman Henry is a loathsome "mountain of dripping," whose life was devoted to adultery and lechery, to whom marriage was a matter of pleasure and voluptuousness and whose life was characterized by the most inordinate brutalities, murders and intrigues, so that the executioner's block stood ready to receive innocent and guilty alike, guilty of anything from murder to the simple sins of apostasy. To the devout Roman Catholic, Henry is unquestionably the devil and the fiend incarnate; but could the immortal Da Vinci, Holbein or Titian have faithfully portrayed that fiend or devil in Henry, could they with greater accuracy have depicted it in any better way than in the serpiginous form of the Spirochaeta pallida? To the devout Protestant, Henry is the man brave and strong enough to free England from the thraldom and usury of the Pope, the founder of the Church of England, defender of the Faith, his atrocities leavened on the altar of necessity, his brutalities overlooked in his zeal to purge England of papal power and authority.

Amongst this mass of popular opinion, what do we, a group of medical men, sitting here tonight as as a court, think of the life of Henry? How would we adjudicate? What verdict would we bring in?

We remember Henry's boyhood, whole hearted and vigorous, one of a fairly large family on both sides, his ancestry clean of any hereditary taint. His early manhood a veritable giant: six feet, four inches tall; the terror of the tilt yard, an athlete of power and renown, the idol of the young women of the court, all eager and willing to pay any price for the Royal favour. Syphilis is sweeping Europe like a veritable plague and the youthful Prince contracted it. One cannot doubt the nature of his illness. The slight fever, the eruption on his back, the subsequent ulcer on his leg, which frequently drove him and his physician, Sir Thomas Butts, to distraction. This ulcer was frequently referred to as a fistula. There can be little doubt that it was a large ulcer, overlying a luetic periostitis or osteomyelitis. When the sinus was draining all was well; when it closed, a fever, pain and distraction, until the sinus broke open and relief was obtained. Certainly it does not sound like the only other common cause of leg ulcers: varicose veins, the ulcers from which are usually singularly painless and not given to sinuses which close and reopen with a flood of pus. His middle life, in the forties, was characterized by the most amazing ideas of grandeur. This little monarch, king of a domain of less than four million souls, believed himself to be the greatest monarch in Christendom. The Emperor Charles V, the greatest living monarch, was a child compared to Henry. Francis, Julius and all others were pigmies compared to our hero. His early degeneration, the tremendous dropsical abdomen, secondary to a cirrhotic liver, associated with biliary calculi, may undoubtedly have been a luetic cirrhosis. The cracked lips, the fissured tongue, the tallow-like flesh, the bilious vomiting, the distressing flatulence, the pillar-like oedema of his legs, the foul odour from his ulcer, all make a picture easy to visualize. I do not assert that Henry was a definite G.P.I. I believe he died a cardiac death before the later manifestations of paresis, in the form of complete

mental breakdown, had time to become manifest, for Henry's mind never failed him. Personal slovenliness was undoubtedly present. His beard, in later life, was stained with the remnants of food, wine and saliva. His doublet was continually similarly soiled. His early death, in his early fifties, was not uncharacteristic of his times, although Norfolk reached 80, Warham and Fisher 70, Pope Julius 80 and Michael Angelo 90.

Was Henry, as reputed, inordinately cruel to his wives? Consider: he was born a dynast. His father had taken the English throne by force. The succession was still uncertain. He had been taught from earliest childhood that the supreme mission of a dynast is to procreate, to beget a son which should be his heir, to beget daughters which could be used as pawns in the great game of dynasties, then at its height. He lived with Catherine of Aragon twenty-four years: it was an incestuous marriage, marked by abortion, miscarriages, premature deliveries and infantile deaths. This went on for years and Henry more and more began to feel that this was a visitation from the Almighty, a punishment for the crime of incest. Modern pathologists would take a different view of these repeated miscarriages and abortions. The mission of the dynast was still unfulfilled. There was no male heir, and when Catherine, at the age of 42, ceased to menstruate, was sick and sombre and poor company, Henry divorced himself from her morose and now sapless bosom, spurred, as a modern Freudian might state, by a "dynastic urge." There was no personal cruelty to Catherine. She was subsequently well taken care of. But love enters not into the marriage of kings. She was a brood mare who would not breed and so no use to a dynast. Anne Boleyn, taken in a wave of passionate ecstasy, soon began to abort as had Catherine. She bore Elizabeth, probably the daughter of Norris. In her desire to produce a son, she tried too many lovers, and although her cupidity was never wholly proven, the disgrace was too much to be borne, the people called her "the concubine" and "Anne Bullen—the whore," and the first woman to be created a peer of the realm, became the first woman to be publicly executed in England. Jane Seymour, herself but a child, died of puerperal septicaemia, following the birth of the long sought son and heir. Anne of Cleves, whose marriage was never consummated, was richly endowed with Royal favours as a reward for not opposing Henry's desire for divorce. Katherine Howard, a wanton, a nymphomaniac, whose licence and lewdity knew no horizons, was beheaded, and many a modern woman has been shot for less. Katherine Parr survived him.

All this for the sake of living, healthy sons. What of his children? The Duke of Richmond, illegitimate offspring of Bessie Blount, a pale, pasty, anaemic child, died in early youth. Mary, scarred with the taint of congenital syphilis, reared in an atmosphere morose and depressing to the extreme, taught from her childhood to abhor and detest the whole idea of the Reformation, her soul dwarfed with suppressed hate and bigotry, her subsequent reign as "Bloody Mary" might have been foreseen. Edward, Prince of Wales, son of Jane Seymour, sickly and a weakling, died in the early years of his regency. Elizabeth, daughter of Anne Boleyn, probably not his child, not syphilitic, was destined to lead England to a glory hitherto unapproached. Henry undoubtedly weaved into the long rope of British history the scarlet thread of syphilis.

To a modern psychiatrist Henry presents a beautiful example of the Oedipus complex so fully elaborated by Freud. Oedipus is a character in the Greek epic Oedipodea, and he is shown as the son of Louis, King of Thebes, and of Jocasta, his queen. Separated from his family in early life, the young boy was ignorant of his own parenthood, and later, returning to Thebes, slew his father and married his mother, from which union four children were born. The sexual attraction of blood relative for blood relative has been woven by Freud into a famous complex, well known to psychiatrists as the Oedipus complex. Henry certainly must have satisfied his Oedipus complex because he seems to have been attracted all through his life by women of close blood relationship; most of his marriages were incestuous, and if ever an Oedipus complex in a man received full gratification, surely the case of Henry VIII was one. By some, to this close inbreeding has been attributed the pitiful condition of Henry's children, particularly Prince Edward, son of Jane Seymour, an incestuous union. Today incest is both a crime and a sin, violating as it does both the laws of the country and Holy Writ. History teems with the brilliant names of men and women, the offspring of such close blood relations as brother and sister. It is a common belief that such unions result in half-wit children. Is this actually a fact substantiated by medical evidence? Does the breeding of a man differ from the inbreeding of animals? Kemble believes that it is not. "The effect of inbreeding with cattle has been truthfully evaluated for a long time past. Many studs consist of animals of the one family stock. It is then well known that if any particular trait is common to both parents it will be reproduced in an intensified degree in the offspring. This rule holds for both good and bad traits alike. Animals' undesirable features, of coat, proportion, temper or flesh, are eliminated from the herd, and by careful selection and judicious mating of those with desirable points it is possible to "breed away from" the objectionable

characteristics and to approach closer and closer to the ideal. Affinity of blood, per se, does not produce any degenerative features, but on the other hand, providing the initial stock is good, it can only be an influence for betterment in breeding since it implies that many good attributes are common to all parents." (Kemble).

Have we any parallel in human life to the inbreeding of a herd of cattle which might refute the suggestion that the condition of Henry's children was due to incest. Let us consider the family tree of the Ptolemies of Egypt. The first Ptolemy was the son of Lagos, a Macedonian general under Alexander the Great. His mother, a relative of the King of Macedonia, both of good, sound, healthy stock. For three centuries, including thirteen life cycles, the Ptolemies all married their own sisters or other very close blood relations. Cleopatra was the fourteenth generation of successive brother and sister marriages. Her father and mother were brother and sister, yet history has produced few more brilliant intellects among women than Cleopatra. Her physical beauty is traditional. There is no physical or mental breakdown here after fourteen generations. What of her morals? Judged by present standards, she had a convenient lack of morals, but she was not considered immoral in her time. She was a typical product of her environment and this promiscuity was perpetuated right down to our own Victorian era. In Henry's time mistresses were quite the thing. A man's legitimate and illegitimate children were frequently raised together and with equal privileges. In much later times mistresses were openly acknowledged and respected, as in France with Madame Du Barry and Madame du Pompadour; so that we cannot say that Cleopatra was a moral degenerate viewed in the light of her times, any more than one can claim King Hal to have been a moral degenerate viewed in the light of his times. If we accept this starting genealogical tree of the Ptolemies, we can scarcely attribute the difficulties of Henry's offspring to incest.

How small a thing it takes to change the course of human destiny! From the great wealth of material, just a few striking examples: Louis XVI had a phimosis and was unable to consummate his marriage with Marie Antoinette. Fear of the simple surgical operation of circumcision paved the way for the French Revolution. Louis delayed his operation for seven years and Marie took her pleasures where she found them. Tales of her flightiness spread through France, fostered by Louis' brothers, who hoped to inherit his throne. His circumcision, followed by heirs to the throne, came too late. Lord Byron, born with the spirit of a soldier, fired with the ambition to deliver Greece, was born with a talipes equino-varus which ruined his physical career and he, shunning the society of men, became a lady's man, which resulted in the production of some of the Empire's finest poetry. The infinitely minute tubercle bacillus saddened the soul and tinctured the music of Chopin. A contracted pelvis prevented Queen Anne from giving birth to a living child or to children which, if alive, were so maimed by cerebral birth trauma that none survived childhood. If a simple Caesarean section had given Anne one living child, the present House of Hanover would probably not be ruling in the Empire today. There would have been no Queen Victoria the Good, or Edward the Peacemaker, and King Henry's Tudors would still be ruling England. An uncharted ditch cost Napoleon the Battle of Waterloo, changing the course of history. The importance of the infinitely little, in Henry's case the spirochaete, made the British Empire a Protestant nation.

The story of his brutality I believe to be largely a myth. In later life his brilliant intellect was dulled by a toxin which was neither understood nor recognized. The supreme tragedy of his life is the advent into the regal veins, at an early age. of the treponema pallidum which, disporting therein, wrought changes for which Henry cannot be held responsible. His multiple marriages were the result of his desire for a son, a desire the fulfilment of which was nullified by the same spirochaete. There was a rough justice about old King Hal's doings, an early British sense of fairness which fails to characterize the actions of contemporary monarchs. Henry's life and actions seem very kind, humane and almost saint-like compared with the earlier Caesars, the Empress Theodare, the temporal Popes, Caesare and Lucrezia Borgia, the Romanoffs, Genghis Khan, Katherine, Peter, Frederick the Great or Ivan the Terrible.

What verdict shall we bring in? Guilty of infamous cruelty, or not guilty? In the early days of Victoria, a man rushed out of the crowd and fired a shot at the Queen's person. At the subsequent trial, it being proven that he was hopelessly insane, a verdict of not guilty was brought in. Victoria was furious. Not guilty? What, I saw it myself! To placate the Queen, British jurists altered the verdict to meet this and subsequent occasions to "Guilty but insane." Shall this be our verdict? Shall we say "Guilty, but irresponsible, due to the ravages of untreated lues?" Such is my verdict! "Much as we hate to have our earlier ideas and beliefs disrupted and to relinquish traditional examples of wickedness, when Reason is the Iconoclast and Medical Fact his mighty weapon, the gods all crumble in the musty temples of traditional prudery, we shall turn to worship at the altar of enlightened truth." (Kemble).

The Editor of the Bulletin of the Vancouver Medical Association appended the following note: "Dr. Lyon Appleby read the paper on The Medical Life of Henry the Eighth before the Vancouver Medical Association on January 6th, 1934. Probably nobody got more out of the paper than Dr. Appleby himself, whose reading in search of material for his presentation must have carried him into many delightful fields. One of the most enjoyable parts of the evening's programme was the contribution by Dr. Wallace Wilson, who, in a delightful speech, challenged most of Dr. Appleby's conclusions as regards the syphilitic theory as used to account for the vagaries of Henry the Eighth. While not disputing many of the facts adduced by Dr. Appleby in support of his theory, he questioned the interpretation put on these facts, and backed his contentions by numerous quotations and references which displayed a remarkably catholic knowledge of the history of Tudor times. Dr. Appleby admitted that the case might well be interpreted the one way as the other, but pointed out that his idea had been to provoke discussion."

One further note might be added. It has been stated that the verdict "guilty but insane" was in common use before the reign of Queen Victoria, though the incident recorded here no doubt occurred.

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Medico-Literary

J. C. Hossack, M.D., C.M. (Man.)

Mental Imagery

Anecdotes find their way into print, from time to time, of persons whose visual memory is so clear and sharp as to present mental pictures that may be scrutinized with nearly as much ease and prolonged attention as if they were real objects. I became interested in the subject and made a rather extensive inquiry into the mode of visual presentation in different persons, so far as could be gathered from their respective statements. It seemed to me that the results might illustrate the essential differences between the mental operations of different men, that they might give some clue to the origin of visions, and that the course of the injury might reveal some previously unnoticed facts.

The earliest results of my inquiry amazed me. I had begun by questioning friends in the scientific world, as they were the most likely class of men to give accurate answers concerning this faculty of visualizing, to which novelists and poets continually allude, which has left an abiding mark on the vocabularies of every language, and which supplies the material out of which dreams and the well-known hallucinations of sick people are built.

To my astonishment, I found that the great majority of the men of science to whom I first applied protested that mental imagery was unknown to them, and they looked on me as fanciful and fantastic in supposing that the words "mental imagery" really expressed what I believed everybody supposed them to mean. They had no more notion of its true nature than a colour-blind man, who has not discerned his defects, has of the nature of colour. They had a mental deficiency of which they were unaware, and naturally enough supposed that those who affirmed they possessed it, were romancing.

On the other hand, when I spoke to persons whom I met in general society, I found an entirely different disposition to prevail. Many men and a yet larger number of women, and many boys and girls, declared that they habitually saw mental imagery, and that it was perfectly distinct to them and full of colour. The more I pressed and cross-questioned them, professing myself to be incredulous the more obvious was the truth of their first assertions. They described their imagery in minute detail, and they spoke in a tone of surprise at my apparent hesitation in accepting what they said. I felt that I myself should have spoken exactly as they did if I had been describing a scene that lay before my eyes, in broad daylight, to a blind man who persisted in doubting the reality of vision. Reassured by this happier experience, I recommenced to inquire among scientific men, and soon found scattered instances of what I sought, though in by no means the same abundance as elsewhere.

Scientific men, as a class, have feeble powers of visual representation. There is no doubt whatever on the latter point, however, it may be accounted for. My own conclusion is, that an over-ready perception of sharp mental pictures is antagonistic to the acquirement of habits of highly-generalized and abstract thought, especially when the steps of reasoning are carried on by words as symbols, and that if the faculty of seeing the pictures was ever possessed by men who think hard, it is very apt to be lost by disuse. The highest minds are probably those in which it is not lost, but subordinated, and is ready for use on suitable occasions. I am, however, bound to say, that the missing faculty seems to be replaced so serviceably by other modes of conception, chiefly, I believe, connected with the incipient motor sense, not of the eyeballs only but of the muscles gen-

erally, that men who declare themselves entirely deficient in the power of seeing mental pictures can nevertheless give life-like descriptions of what they have seen, and can otherwise express themselves as if they were gifted with a vivid visual imagination.

It may seem surprising that one out of every sixteen persons who are accustomed to use accurate expressions should speak of their mental imagery as perfectly clear and bright; but it is so, and many details are added in various returns emphasizing the assertion. One of the commonest of these is to the effect, "If I could draw I am sure I could draw perfectly from my mental imagery." That some artists, such as Blake, have really done so is beyond dispute, but I have little doubt that there is an unconscious exaggeration in these returns. My reason for saying so is that I have also returns from artists who say as follows: "My imagery is so clear, that if I had been unable to draw I should have unhesitatingly said that I could draw from it."

Mr. Flinders Petrie, a contributor of interesting experiments on kindred subjects to Nature, informs me that he habitually works out sums by aid of an imaginary sliding rule, which he sets in the desired way and reads off mentally. He does not usually visualize the whole rule, but only that part of it with which he is at the moment concerned. I think this is one of the most striking cases of accurate visualizing power it is possible to imagine.

Among the races who are thus gifted are the commonly despised, but, as I confidently maintain from personal knowledge of them, the much under-rated Bushmen of South Africa.

The method by which the Bushmen draw is described in the following extract from a letter written to me by Dr. Mann, the well-known authority on South African matters of science. The boy to whom he refers belonged to a wild tribe living in caves in the Drakenberg, who plundered outlying farms, and were pursued by the neighbouring colonists. He was wounded and captured, then sent to hospital, and subsequently taken into service. He was under Dr. Mann's observation in the year 1860, and has recently died, to the great regret of his employer, Mr. Proudfoot, to whom he became a valuable servant.

Dr. Mann writes as follows:

"This lad was very skilful in the proverbial Bushman art of drawing animal figures, and upon several occasions, I induced him to show me how this was managed among his people. He invariably began by jotting down upon paper or on a slate a number of isolated dots which presented no connection or trace of outline of any kind to the uninitiated eye, but looked like the stars scattered promiscuously in the sky. Having with much deliberation satisfied himself of the sufficiency of these dots, he forthwith began to run a free bold line from one to the other, and as he did so the form of an animal—horse, buffalo, elephant, or some kind of antelope—gradually developed itself. This was invariably done with a free hand, and with such unerring accuracy of touch, that no correction of a line was at any time attempted. I understood from the lad that this was the plan which was invariably pursued by his kindred in making their clever pictures."

It is impossible, I think, for a drawing to be made on this method unless the artist had a clear image in his mind's eye of what he was about to draw, and was able, in some degree, to project it on the paper or slate.

Other living races have the gift of drawing, but none more so than the Eskimo. I will therefore speak of these and not of the Australian and Tasmanian pictures, nor of the still ruder performances of the old inhabitants of Guiana, nor of those of some North American tribes, as the Iroquois. The Eskimos are geographers by instinct, and appear to see vast tracts of country mapped out in their heads. From the multitude of illustrations of their map-drawing powers, I may mention one of those included in the journals of Captain Hall, which were published in 1879 by the United States Government, under the editorship of Professor J. E. Nourse. It is the facsimile of a chart drawn by an Eskimo who was a thorough barbarian in the accepted sense of the word; that is to say, he spoke no language besides his own uncouth tongue, he was wholly uneducated according to our modern ideas, and he lived in what we should call a savage fashion. This man drew from memory a chart of the region over which he had at one time or another gone in his canoe. It extended from Pond's Bay, in lat. 73°, to Fort Churchill, in lat. 58° 44', over a distance in a straight line of more than 960 nautical, or 1,100 English miles, the coast being so indented by arms of the sea that its length is six times as great. On comparing this rough Eskimo outline with the Admiralty chart of 1870, their accordance is remarkable. I have seen many MS. route maps made by travellers a few years since, when the scientific exploration of the world was much less advanced than it is now, and I can confidently say that I have never known of any traveller, white or brown, civilized or uncivilized, in Africa, Asia, or Australia, who, being unprovided with surveying instruments, and trusting to his memory alone, has produced a chart comparable in extent and accuracy to that of this barbarous Eskimo. The aptitude of the Eskimos to draw, is abundantly shown by the numerous illustrations in Rink's work, all of which were made by self-taught men, and are thoroughly realistic.

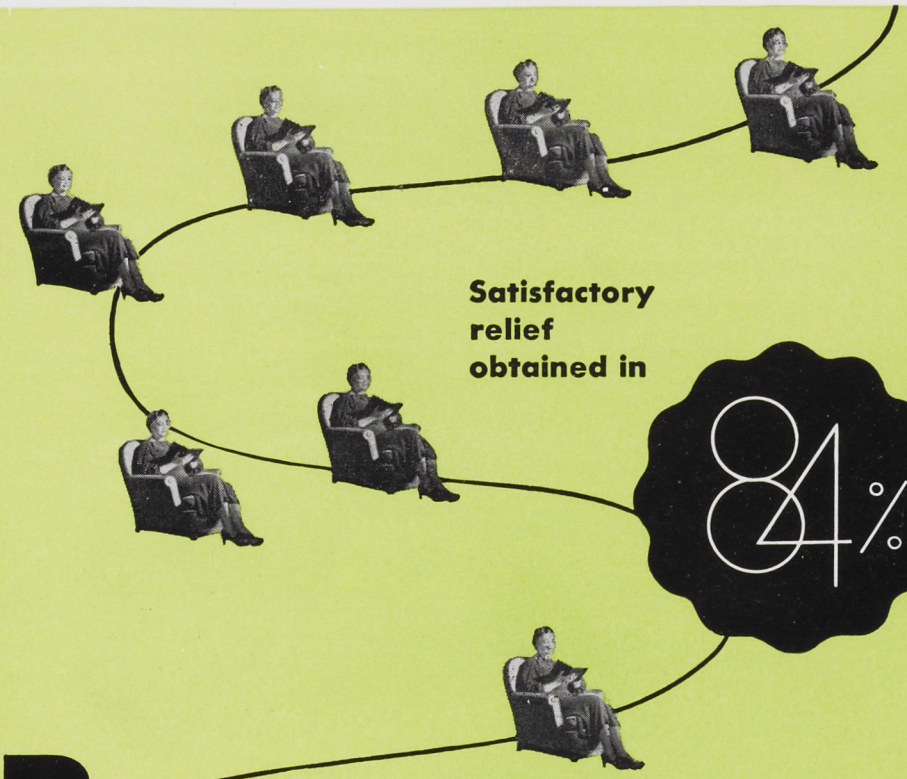
So much for the wild races of the present day; but even the Eskimo are equalled in their power of drawing by the men of old times. In ages so far gone by, that the interval that separates them from our own may be measured in perhaps hundreds of thousands of years, when Europe was mostly icebound, a race who, in the opinion of all anthropologists, was closely allied to the modern Eskimo, lived in caves in the more habitable places. Many broken relics of that race have been found; some few of these are of bone engraved with flints or carved into figures, and among these are representations of the mammoth, elk, and reindeer, which, if made by an English labourer with the much better implements at his command, would certainly attract local attention and lead to his being properly educated, and in much likelihood to his becoming a considerable artist if he had intellectual powers to match.

It is not all improbable that these prehistoric men had the same geographical instincts as the modern Eskimo, whom they closely resemble in every known respect. If so, it is perfectly possible that scraps of charts scratched on bone or stone, of prehistoric Europe, when the distribution of land, sea, and ice was very different to what it is now, may still exist, buried underground, and may reward the zeal of some future cave explorer.

There is abundant evidence that the visualizing faculty admits of being developed by education. The testimony on which I would lay especial stress is derived from the published experiences of M. Lecoq de Boisbaudran, late director of the Ecole Nationale de Dessein, in Paris, which are related in his Education de la Memoire Pittoresque. He trained his pupils with extraordinary success, beginning with the simplest figures. They were made to study the models thoroughly before they tried to draw them from memory. One favourite expedient was to associate the sight memory with the muscular memory, by making his pupils follow at a distance the outlines of the figures with a pencil held in their hands. After three or four months' practice, their visual memory became greatly strengthened. They had no difficulty in summoning images at will, in holding them steady, and in drawing them. Their copies were executed with marvellous fidelity, as attested by a commission of the institute, appointed in 1852 to inquire into the matter, of which the eminent painter Horace Vernet was a member. The present Slade Professor of Fine Arts at University College, M. Legros, was a pupil of M. de Boisbaudran. He has expressed to me his indebtedness to the system, and he has assured me of his own success in teaching others in a somewhat similar way.

Colonel Moncrieff informs me that, when wintering in 1877, near Fort Garry in North America, young Indians occasionally came to his quarters, and that he found them much interested in any pictures or prints that were put before them. On one of these occasions he saw an Indian tracing the outline of a print from the Illustrated News very carefully with the point of his knife. The reason he gave for this odd manoeuvre was, that he would remember better how to carve it when he returned home.

Francis Galton "Inquiries Into Human Faculty."



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Freed, S.C., Eisin, W.M. and Greenhill, J.P.: J. Clin. Endocrinol. **3**:89 (Feb.) 1943.

Fried, P.H. and Hair, Q.: J. Clin. Endocrinol. **3**:512 (Sept.) 1943.

Glass, S.J. and Rosenblum, G.: J. Clin. Endocrinol. **3**:95 (Feb.) 1943.

Gray, L.A.: J. Clin. Endocrinol. **3**:92 (Feb.) 1943.

Harding, F.E.: West. J. Surg. Obst. & Gynec. **52**:31 (Jan.) 1944.

Perloff, W.H.: Am. J. Obst. & Gynec. **58**:684 (Oct.) 1949.

Sevringhaus, E.L. and St. John, R.: J. Clin. Endocrinol. **3**:98 (Feb.) 1943.

"Premarin" is supplied in tablets of 0.3, 0.625 (with or without ½ grain phenobarbital), 1.25 and 2.5 mg., or as liquid containing 0.625 mg. conjugated estrogenic substances (equine) per teaspoonful.

25TH Ayerst ANNIVERSARY YEAR

Other Ayerst Endocrine Preparations include "A.P.L." (chorionic gonadotropin), PROGESTERONE and TESTOSTERONE in various forms and potencies.

3119

AYERST, McKENNA & HARRISON LIMITED • *Biological and Pharmaceutical Chemists* • MONTREAL, CANADA

SOCIAL NEWS

Reported by K. Borthwick-Leslie, M.D.

That "Sporting" coroner of ours, Dr. I. O. Fryer, has quite a reputation in hockey, golf, curling, and I might add smiling. That was a mighty nice column and picture the Tribune had about him. Of course apparently he does a spot of work too.

♦

Dr. and Mrs. Zeavin, accompanied by Dr. Bernard Zeavin, are on holidays in New York. En route they will visit another son and his family, Dr. and Mrs. Irvine Zeavin, in Youngstown, Ohio.

Dr. Bernard, in 1950, won the Chown gold medal. He is doing P.G. work in Opthalmology at Harvard.

♦

Hearty congratulations to Dr. Wallace Grant on being granted a $1,500 research fellowship at Yale University. Wally is on indefinite leave from the Children's Hospital, and will do research in mental health of children. Good luck.

♦

Dr. and Mrs. Colin C. Ferguson, of Boston, visited in town, at the home of Mrs. C. C. Ferguson. Dr. Ferguson has been connected with the Children's Medical Centre in Boston since the beginning of the year.

♦

Dr. Norman Sloan, who has been holidaying with his parents here, has returned to New York to resume his research work in Neurology and Psychiatry.

♦

Dr. J. C. Graham, a 1950 graduate, has taken over the post of Municipal Doctor during the absence of Dr. H. C. Stevenson who is on Active Service.

♦

Dr. Merle Patterson, who has been on a year's furlough, left last week for India, where she will assume her duties as Medical Superintendent of the Hat Piplia Mission Hospital.

♦

It is with tears in "me eyes" that I officially say goodbye to Bob and Mrs. Whitehead, but they are so happy in their move to Victoria, B.C., that I guess we just wish them luck. Bob will be associated with Dr. Revell in their Group Anaesthesiologists. Fee for service, too, B.C. being somewhat more advanced than Man. It begins to look as though we train them for the benefit of other hospitals.

Dr. Elizabeth Johnson and Dr. Ronald R. Aitken, of London, Ont., exchanged marriage vows Sept. 3. The bride, daughter of Dr. and Mrs. Kenneth Johnson, is a 1946 graduate of Man. Medical and has been doing P.G. work in Vancouver and Montreal. Dr. Aitken is a graduate of Western University, London, Ont. The young couple motored to the west coast and will visit California before returning to London, Ont., to reside.

♦

Sept. 16, Eleanor June Anderson became the bride of Dr. E. R. Siddall. Following their wedding reception at the U. Women's Club, Dr. and Mrs. Siddall motored to Minneapolis, prior to taking up residence in Pine Falls. Dr. Siddall is one of our 1949 graduates.

♦

Dr. and Mrs. W. F. Abbott, with their daughter, Elizabeth Ann, motored to Nevada, Missouri, where Miss Abbott will enter Cottey Junior College.

♦

Dr. Emma Adamson, Man. delegate to the International Medical Women's Sixth Congress meeting in Philadelphia, reports a very stimulating, impressive, educational meeting, but more from her anon. Dr. Jessie McGeachy attended the Toronto meeting with Emma prior to the Congress, and then attended a family reunion in the east.

♦

Welcome to our new members:

Dr. and Mrs. Campbell MacArthur, of Oakville, Ont., announce the arival of their son.

Dr. and Mrs. G. R. Diehl (nee Ruth Ferguson) announce the arrival of their son, Shawn Ayleworth, Sept. 16.

Dr. and Mrs. J. L. Asseltine also welcome the arrival of Wilbert Norman.

Dr. and Mrs. Stephen Drulak are happy to announce the birth of Murray Wilson, Sept. 24.

Dr. and Mrs. D. L. Kippen are happy to announce their daughter, Stacey Louise, Aug. 29.

Dr. and Mrs. Archie Gray and Judy are also happy to welcome Judy's baby sister.

Dr. and Mrs. W. S. Pollard, of Maddock, N.D., announce the birth of their second daughter.

♦

As for me! Saturday I became the godmother of Linda Susan Gregory, the latest granddaughter of Mrs. Gerald Williams and the late Dr. Gerald Williams. As my young David said, "Gee, Mom, the Prayer Book says you are responsible for her religious education!"

Manitoba Medical Association
1950 Committee Reports

Executive

To the Executive Committee and Members of
The Manitoba Medical Association:

This report covers the twelve month period from October, 1949, to September, 1950, during which time there have been eight meetings with an average attendance of fifteen members. Much time and interest have been involved by the various committees and representatives to various organizations.

1. Date of Annual Meeting.

Efforts are still being made with the interested parties and through the parent body to correlate dates by assigning fixed consecutive weeks for the four Western Divisional meetings. Such a plan would be of advantage to each province and to the Commercial Exhibitors who contribute in no small measure to the success of the meeting. One of the difficulties is that of securing necessary hotel accommodation. In 1953 the Canadian Medical Association will meet in WINNIPEG.

2. Membership.

The high level attained last year has been maintained and losses sustained through removal, retirement or ill health have been compensated (to some extent) by additions of recent graduates and new registrants. Increased assessment was paid to the Canadian Medical Association.

3. Arthritis.

The local branch of the Canadian Arthritis and Rheumatism Society reports progress in the matter of organization, more especially in the establishment of Outpatient Clinics in the major teaching hospitals. The financial campaign date co-incided with the Manitoba Flood Appeal and was cancelled. Assistance was afforded to the C.M.A. Representative, who conducted a national survey in Arthritis.

4. 81st Annual Meeting, C.M.A.

The historic port of Halifax was the venue for the meeting held June 19th to 23rd. This Division was represented at General Council by Doctors J. D. Adamson (Chairman, Credentials and Ethics), Elinor F. E. Black, C. W. Burns, A. M. Goodwin, Eyjolfur Johnson, M. T. Macfarland, J. McKenty, R. W. Richardson, D. L. Scott, L. A. Sigurdson, F. Hartley Smith, P. H. T. Thorlakson. Dr. N. H. Gosse is the new President, and Dr. J. A. Gunn, Winnipeg, was named to Senior Membership.

5. Cancer.

Last year the problem of diagnostic clinics was referred back to the Executive Committee for further study and action. The report of the Association representatives, and Committee on Economics, will deal with developments in that field.

6. District Medical Societies.

Activity has continued, and the College of Physicians and Surgeons increased the amount of grant for defraying the expenses of speakers. Detailed information will be given in the report of the Extra Mural Committee.

7. Federal Health Grants.

Attention was drawn last year to the fact that the Health Survey Committee had not been called to meet. That situation was clarified when a meeting was called in February last and various sub-committees formed. The director of the survey requested co-operation in connection with a questionnaire to be sent out to all members of the profession. No notice has been received during the year of any meetings of the Central Advisory Committee which reviews projects submitted for provincial approval.

8. Health Services Act.

The Chairman, Committee on Economics, was named a member of the Advisory Commission. During the year, there has been considerable discussion of the operation of diagnostic units, and a special sub-committee was set up to investigate and report on the same.

9. Legislation.

In former years, the Minister of Health, or his Deputy, has given some hint of intended legislation which may affect the profession, but that procedure was not carried out during the last session. Copies of two bills were received on the day they were to have second reading. Amendment to the Health Services Act substitutes "Laboratory and X-Ray Services" for the term "Diagnostic Unit." Efforts to secure permission for the use of spot-lights on doctors' cars were not successful.

10. Manitoba Medical Review.

This year only ten issues are anticipated due to the linking of June-July and August-September issues. The Editorial Committee report contains worthwhile suggestions, and seeks the co-operation of each member.

11. Manitoba Medical Service.

A representative has been named to attend the Annual Meeting and report on behalf of this profession-sponsored plan. Some of the problems will be discussed also in the report of the Committee on Economics. Several members have yet to be convinced regarding the wisdom of extending the plan to rural areas or of a non-group contract, but the voluntary method is considered more satisfactory than any system of government control.

12. Multiple Sclerosis Survey.

A report of the survey conducted during the summer of 1949 will be presented during the scientific session by Dr. L. T. Kurland.

13. Pension Plan.

No plan has evolved provincially since changes in federal legislation, which would permit income tax deductions for individual contributions, are still under consideration.

14. Public Relations.

A Committee to deal with this important aspect of Association activities was formed during the year, and will report progress. Members will already have received copies of "On Call," the monthly publication of the C.M.A.

15. Sections or Affiliated Societies.

In addition to the General Practitioner, Internist, Neuropsychiatrist, and Radiologist groups, affiliation was extended during the year to Eye, Ear, Nose and Throat, Orthopaedic, and Pathologist groups. Some of these groups are meeting coincidentally and may submit reports or recommendations to this meeting.

16. Workmen's Compensation Board.

As recommended last year, approval was given by the College of Physicians and Surgeons to a resolution restoring the Fee Taxing Committee to the Association, and a limited grant to defray the expenses was approved by the College. Several meetings have been held, at some of which appeals were considered.

17. Crippled Children.

Subsequent to the survey which was undertaken in the province, the Council of Social Agencies sponsored a new organization to be known as "The Manitoba Society for Crippled Children." Representation by the Association is through one member of the Board and three members of the Medical Advisory Committee.

18. Fee Committee.

Many requests have been received during the year from individual members, groups, or M.M.S. for interpretation, revision, insertion of new procedures, etc. A request of the General Practitioners' Association for one fee based on the present remuneration to specialists was referred to the Executive Committee, but no action was taken. Other submissions are pending.

19. Manitoba Flood.

Several members of the Association suffered great personal loss during the spring flood. During the period of disruption all members were inconvenienced, yet found time to assist in one manner or another those persons who were less fortunate. The resources of the Association were thrown behind the Red Cross, which lacked personnel. Members served in the Armed Forces, on planning staffs, on the dykes, or continued to bring comfort and the benefits of inoculation to those requiring such. Later, when the profession was canvassed, $50,000.00 was subscribed to the Manitoba Flood Relief Fund.

20. Department of Veterans Affairs.

Announcement in the House of Commons that non-entitled veterans would be admitted to Department Hospitals on payment of the per diem rate of $8.65, plus the medical fee, created a prob'em involving the medical profession. D.V.A. Hospitals are closed, and the patient would not have free choice of doctor. Committees have been named at each of the hospitals to study the matter, and a full report will be presented to the C.M.A. Executive Committee.

21. Red Cross Blood Transfusion Service.

During the year, this service was organized and has been of great value to the Greater Winnipeg area. Arrangements are proceeding for extension to other centres. The Association appointed one representative to the Red Cross Committee.

22. Manitoba Medical Centre.

Since the Board no longer functions, on motion of the Executive Committee in October, 1949, no selection of the Association to the Board, Manitoba Medical Centre, was made.

Appreciation is extended to all members who have co-operated so generously during the year.

D. L. Scott,
President.

C. B. Schoemperlen,
Honorary Secretary.

Honorary Treasurer

23.

To the President and Executive of
The Manitoba Medical Association:

Herewith certified financial statement from our auditors, Messrs. Thornton, Milne and Campbell, for the year 1949, also supplemental statement, prepared by the office, to August 31st, 1950.

8th February, 1950.

To the Members,
Manitoba Medical Association,
Winnipeg, Manitoba.

Dear Sirs:

In compliance with your request, we have audited the books and accounts of your Association for the year ended 31st December, 1949, and submit herewith our report thereon, together with the following relative financial statements:

EXHIBITS:

"A" Statement of Assets and Liabilities as at 31st December, 1949.

"B" Statement of Revenue and Expenditure for the year ended 31st December, 1949.

As set forth in Exhibit "B," the excess over Expenditure amounted to $2,424.55. Membership fees received or accrued are in accordance with duplicate receipts on file and were reconciled with the membership cards issued. In accordance with the minutes of the meeting held on 20th February, 1949, the sum of $200.00 per month has been received from the College of Physicians and Surgeons, covering their portion of the general office expenses. All expenditures have been properly authorized and satisfactory vouchers were produced for our examination.

Relative to our examination of the various items comprising the Statement of Assets and Liabilities, marked Exhibit "A," we would comment as follows:

CASH ON HAND AND IN BANK, $3,512.46: We did not count the cash on hand. The cash in bank was reconciled with a certificate received from the Bank of Montreal, subject to an allowance for outstanding cheques, amounting to $1,407.71, as shown by the books.

ACCOUNTS RECEIVABLE, $729.23: Accounts Receivable on behalf of the Review are considered to be fully collectible. The amount owing from the College of Physicians and Surgeons represents expenditures made by the Association on behalf of Extra-Mural Services.

INVESTMENTS, $10,107.12: During the year $2,000.00 Dominion of Canada 3% 1952 and $1,000.00 Canadian National Railways 5% 1969 bonds were redeemed at a profit of $25.00 and $68.93 respectively. The gain has been credited to Surplus, as shown on Exhibit "A." With the proceeds of the redemption, $3,000.00 Dominion of Canada 3% 1966 bonds were purchased by the Association at a cost of $3,101.25.

We are pleased to report that during the year the Association transferred all their bonds from Bearer form to Registered form to agree with our suggestion in last year's report.

Bond interest was duly accounted for in the past year. We examined the Bonds and found same to be in order.

In conclusion, we wish to report that we found the records satisfactorily kept and that all our requirements as auditors have been fully complied with.

Yours very truly,
THORNTON, MILNE & CAMPBELL,
Chartered Accountants.

24. Exhibit "A"

Statement of Assets and Liabilities As at 31st December, 1949

ASSETS

Cash:			
Petty Cash on Hand		$ 20.00	
Bank of Montreal		3,492.46	
			$ 3,512.46
Accounts Receivable:			
Review Advertisers		$ 433.51	
Advance Expenses paid on Review		143.08	
College of Physicians and Surgeons (Extra Mural)		107.64	
Fee Taxing Committee, W.C.B.		45.00	
			729.23
Fees in Arrears			7.00
Investments:			
(Market Value $10,641.50)			
Province of Manitoba:	Par	Cost	
4½% 1956	$2,000.00	$ 1,957.12	
Dominion of Canada:			
3% 1951	2,000.00	2,000.00	
3% 1957	1,000.00	1,000.00	
3% 1959	500.00	500.00	
3% 1963	500.00	500.00	
3% 1966	4,000.00	4,150.00	
		$10,107.12	
Accrued Interest on Province of Manitoba Bonds, plus premium		49.50	
			10,156.62
Office Furniture and Equipment		$ 734.71	
Less: Reserve for Depreciation		734.71	
			$14,405.31

LIABILITIES

Fees Collected in Advance		$ 11.50
Surplus Account:		
Balance as at 31st December, 1948	$11,875 33	
Add: Gain on Redemption of Bonds:		
Domininon of Canada:		
3% 1952	$ 25.00	
Canadion National Railways:		
5% 1969	68.93	
Excess of Revenue over Expenditure, as per Exhibit "B"	2,424.55	
	2,518.48	
		14,393.81
		$14,405.31

25.

Exhibit "B"

Statement of Revenue and Expenditure
For the year ended 31st December, 1949

REVENUE

Fees collected or accrued:		
483 Members at $27.00	$13,041.00	
111 Members at 7.00	777.00	
42 Members at 11.50	483.00	
7 Members at 24.00	168.00	
2 Members at 4.00	8.00	
6 Members at 13.50 (½ Year)	81.00	
9 Members at 5.75 (½ Year)	51.75	
2 Members at 3.50 (½ Year)	7.00	
662	$14,616.75	
Less: Refund of 1948 fee	7.75	
		$14,609.00
College of Physicians and Surgeons		2,400.00
Winnipeg Medical Society		900.00
Interest on Bonds	337.43	
Add: Premium on U.S. funds	7.00	
		344.43
		$18,253.43

EXPENDITURE

Salaries:		
Dr. M. T. Macfarland	$4,800.00	
H. M. Brown	2,005.00	
J. Allison	1 675.00	
B. J. Wright	1,345.00	
		$ 9,825.00
Expense Allowance—Dr. Macfarland		1.200 00
Honorarium—Dr. Hossack		900 00
Rent		1,476.00
Printing, Postage and Stationery		655 69
Office Furniture and Equipment		247.34
Telephone and Telegraph		220.53
Miscellaneous Expense		62.78
Business Taxes		137 55
Audit Fees	50.00	
Light	50.88	
Bank Charges	10.73	
Machine Servicing	28.55	
Legal Expense	30.00	
Subscriptions	42.48	
Insurance	71.67	
Office Expense	26.51	
Unemployment Insurance	56.16	
Travelling Expense	230.05	
Annual Meeting	$2,364.61	
Less: Rent of exhibit space	1,957.50	
	407.11	
Executive Luncheons	39.85	
Fee Taxing Committee, W.C.B.	60.00	
		$15,828.88
Excess of Revenue over Expenditure for period		2,424.55
		$18,253.43

Supplemental Statement of Assets and Liabilities
January 1st to August 31st, 1950

26.

ASSETS

Cash:		
Petty Cash on Hand	$ 20.00	
Bank of Montreal	9,933.12	
		$ 9,953.12
Accounts Receivable:		
Review Advertisers	$ 1,168.48	
Advance Travelling Expenses, J. G. Whitley	203.33	
College of Physicians and Surgeons, Extra Mural	254.14	
Fee Taxing Committee, W.C.B.	90.00	
Miscellaneous	.95	
		1,716.90
Investments		10,107.12
		$21,777.14

LIABILITIES

Accounts Payable:		
Fees collected in advance	$ 17.72	
Dr. J. C. Hossack, Honorarium	600.00	
		$ 617.72
Deferred Income:		
Annual Meeting, Exhibitors' Deposits	1,890.00	
Credit	5.00	
		1,895.00
Surplus Account:		
Balance as at December 31st, 1949	14,393.81	
Add:		
Excess of Revenue over Expenditure	4,870.61	
		19,264.42
		$21,777.14

Statement of Revenue and Expenditure January 1st to August 31st, 1950

27.

REVENUE

Fees Collected:	1950				1949				1948			
	487	Members	@ $25.00	$12,175.00	480	@ $27.00		$12,960.00	435	@ $27.00		$11,745.00
	103	Members	@ 5.00	515.00	108	@ 7.00		756.00	138	@ 7.00		966.00
Recent Grad.	39	Members	@ 10.72	418.08	42	@ 11.50		483.00	57	@ 11.50		655.50
½ Year @ $25.00	2	Members	@ 12.50	25.00	3	@ 13.50		40.50				
½ Year @ $ 5.00	4	Members	@ 2.50	10.00	1	@ 3.50		3.50				
½ Year paid adv. 1949	2	Members	@ 4.97	9.94								
Recent Grad. ½ Year	5	Members	@ 5.36	26.80	4	@ 5.75		23.00				
Combined Fee	6	Members	@ 22.00	132.00	7	@ 24.00		168.00	5	@ 24.00		120.00
Combined Fee	1	Member	@ 2.00	2.00	2	@ 4.00		8.00	3	@ 4.00		12.00
Combined Fee ½ Year	1	Member	@ 7.50	7.50					2	@ 15.00		30.00
Non-Resident	1	Member	@ 2.00	2.00								
	651			$13,323.32	647			$14,442.00	640			
Plus 1949 arrears				38.50	Less refund			7.75				
Plus refund from C.M.A.				10.00								
Plus foreign exchange				1.50								
				$13,373.32				$14,434.25				$13,528.50

Brought Forward from Fees		$13,373.32
College of Physicians and Surgeons		1,400.00
Winnipeg Medical Society		525.00
Interest on Bonds		127.50
Refund from North American Life & Casualty Co.		115 40
Secretarial Services to Post Graduate Committee		36.00
		$15,577.22

EXPENDITURE

Salaries:		
Dr. M. T. Macfarland, including expense allowance	$ 4.000.00	
Miss H. M. Brown	1,320.00	
Miss Jean Allison	1,100.00	
Miss Barbara Wright	880.00	
Miss Olive Slonecki	361.24	
		$ 7,661.24
Honorarium, Dr. J. C. Hossack		600.00
Unemployment Insurance		44.52
Rent		984 00
Printing, Postage and Stationery		370.91
Office Furniture		23.45
Telephone		138.30
Audit Fee		100.00
Business Tax		132.18
Solicitors' Fee		50.00
Gold Medal		50.00
Light		38.23
Executive Luncheons		18 75
Subscriptions Medical Journals		21.95
Bond on Treasurer		5 00
Servicing Typewriters and Adding Machine		31.00
Miscellaneous Expenses		21.73
Bank Charges		5.65
Travelling Expenses		409.70
		$10,706.61
Excess of Revenue over Expenditure for the period		4.870.61
		$15,577.22

Estimated Cost of Operation to December 31st, 1950

28.

EXPENDITURE

Salaries	$ 4,290.00	
Rent	492.00	
Telephone and Light	80.00	
Printing, Postage and Stationery	100.00	
Miscellaneous	200.00	
Annual Meeting	500.00	
Public Address System	350.00	
Committee on Public Relations	150.00	
Office Alterations	1,100.00	
		$ 7,262.00

REVENUE

College of Physicians and Surgeons	$ 1,000.00	
Winnipeg Medical Society	375.00	
		1,375.00
		$ 5,887.00

29.

As will be noted our revenue has been reduced by reason of increased fee remitted to the Canadian Medical Association. Operating cost is increasing markedly because of the demands made on the secretarial offices by the various affiliated medical organizations, some of whom pay only a small fee towards this service. It has been found necessary to increase the staff in order to cope with all the work and more office equipment will be required. Other new equipment is being purchased, for example, Public Address System. It will be seen that our expenditures this year will be $1,000.00 over and above our actual income, which means that we will have to utilize our reserves. In addition to all this, a greater sum of money will have to be spent by our Committee on Public Relations to acquaint the public with the work of the medical profession and of the Manitoba Medical Service.

30.

The office space now occupied by the Association is completely inadequate and the cost of rearranging to improve, *even a little*, the facilities which we now have will be in the neighborhood of $1,100 00. It is obvious, therefore, that if we are to remain solvent, due consideration will have to be given in the following year to a general increase in membership fees.

All of which is respectfully submitted.

Ruvin Lyons,
Chairman.

Membership

To the President and Executive of
The Manitoba Medical Association:

31.

I wish to present the following report to date:

There are 781 Doctors in the Province of Manitoba
550 Winnipeg
231 Rural

671	Active Paid-up Members	482 Winnipeg 189 Rural
9	Senior Members	5 Winnipeg 4 Rural
1	Honorary Member	1 Winnipeg
38	Retired or over 70 years	29 Winnipeg 9 Rural
75	Membership Fees Unpaid	43 Winnipeg 32 Rural
794		
781		
13	Paid fees who have since left province, or are deceased.	

32.

Of the 75 members whose fees are unpaid, 21 are new registrants and 6 are not practising, leaving a potential 48 from whom fees are collectible. On this basis, the percentage of paid-up membership is 93%.

63 members have been lost to us during the year, 15 are deceased and 48 have left the province.

54 new members have been enrolled to date this year.

In the matter of numbers, this is the highest paid-up membership ever attained, but the percentage is about the same as in recent years, which is most gratifying to your committee. We are hopeful of being able to persuade many of those who have not yet enrolled to do so before the end of the current year and so participate in the privileges of Association membership.

I should like, personally, to express my sincere appreciation to all members for their co-operation and bespeak your continued support.

Respectfully submitted.

Ruvin Lyons,
Chairman.

Economics

To the President and Executive of
The Manitoba Medical Association:

33.

The Committee on Economics dealt with many minor and some major problems affecting our profession during the year and has attempted to keep in touch with all aspects of a changing economy in medical practice. It has been noted that nearly every committee of our Association is at some time affected by an economic problem and must comply with one broad policy. In the past the Committee on Economics was almost a one man job but this has been found to be impossible and the Chairman cannot be a member of every committee where economics are bound to be a concern such as the Manitoba Medical Service, the Advisory Health Commission, the Provincial Survey Committee, the Workmen's Compensation Board, the Cancer Relief and Research, and the multitude of minor committees which have come into being for Crippled Children, Arthritis, Heart Disease, Department of Veterans Affairs, etc. These new organizations, especially, require the surveillance of your committee. Therefore, it has been recommended to your Executive that a member of the Economics Committee be appointed to each of these committees and that the Chairman act as a co-ordinator for all matters of economics. In this way we can apply one policy for all. It is evident that we cannot have one arrangement for the Cancer Society and another for the Arthritic Society.

34.

The most onerous and protracted negotiations of your committee have been with the Cancer Relief and Research Institute regarding the establishment of Diagnostic Clinics for the rural population. This question was referred back to the Executive last year by the General Meeting. A separate report of the final agreement will be given by the Cancer Committee. A committee from each body agreed upon a complete plan for all rural patients, whereby regular fees would be paid for services both in the clinics and in private offices. This was the service contemplated at first by the Board of the Cancer Relief and Research Institute. Then it was found that there was not enough money available for such a wide coverage and finally a plan was agreed upon for only those who were medically indigent or not government wards. These medical indigents would cause us no change in policy, as such people have been given free treatment in our Outpatient Clinics for many years and a plan for them alone was easily worked out. The funds of the Cancer Board will be used to supply clerical staff, hospitalization, etc. The medical care will be given by the hospital staffs without remuneration as at present. There will be careful screening, it is believed, so that the term "medical indigent" will not be abused.

35.

The plan for the coverage of all people of rural Manitoba is still on hand and we will insist on its adoption if the Board wishes to expand the plan. Your committee is of the opinion that this complete plan embodies all the principles necessary to the continuation of good medical practice..

36.

Your Chairman has been on the Advisory Commission under the Health Services Act and there is nothing further to report on rural hospitalization than that given a year ago. The name of the Diagnostic Centres at Dauphin and Selkirk has been changed to that of Laboratory and X-Ray Service Units. The criticism levelled at these units at our last general meeting has been taken very seriously by the Department of Health and some changes were made immediately, showing that criticism of a government-sponsored agency, even if exaggerated, can have good effects. Some months ago the Advisory Commission appointed a committee to investigate all aspects of these units and to date of writing this report has not been received by the Commission. Any modification of our opinion of these units should await this report which, if approved by the Department of Health, will no doubt have wide publication.

37.

The City of Winnipeg Council has a committee studying the feasibility of a similar unit, or units, in Winnipeg and your committee is interested in any developments.

38.

The Manitoba Medical Service will be discussed under a separate report. Your committee notes with satisfaction the program to extend the services into the rural areas and the inauguration of an individual contract. The Board and Executive Director of the Manitoba Medical Service have consulted your Economics Committee and kept us informed on all matters affecting economic policy. Even a closer liaison will be made next year when it is recommended that one nominee to the Board will be made by the Executive from this committee.

39.

This year once again the problem arose of medical members of the Manitoba Medical Service having separate private contracts which seemed competitive with the Manitoba Medical Service. This is a very controversial subject and your committee did not feel justified in investigating and bringing in a report without specific instructions to do so from a General Meeting of the Association.

40.

You will be receiving a separate report from the Workmen's Compensation Board Committee, but there is one matter which concerns economic policy and probably ethics. The Workmen's

Compensation Board now accepts Chiropractors and Osteopaths for the care of their patients and the Board has asked our Radiologists to read the plates taken by these Chiropractors and Osteopaths and the Board may expect medical specialists to consult with them on difficult cases. It is the opinion of this committee that it would be unwise for medical members to take any partial responsibility outside our own profession for the diagnosis or treatment of a patient. It is, therefore, recommended to the members of this Association that they refrain from such action.

41.

During the year your committee has come in contact with lay people on various negotiations. It has been noticed that lay people expect government funds, such as federal grants, to be used to pay for all things required for health, except medical fees. They expect business concerns to be paid for supplies at usual rates; even legal fees are paid by so-called charitable organizations, but the medical profession is expected to give free services. To some laymen it would seem unusual for doctors to be paid. Since it would appear that large sums of federal money are going to be paid for health services in the future, we suggest that we should change our policy of giving our services free where these monies are used.

Respectfully submitted.

Elinor F. E. Black,
Ruvin Lyons,
Roy W. Richardson,
Chairman.

Workmen's Compensation Board Negotiating Committee

To the President and Executive of
The Manitoba Medical Association:

42.

Those of you who have dealings with the Workmen's Compensation Board are aware of the existence and functions of the Fee Assessment Committee. Contentious accounts, or fees covering procedures, which are not listed, or for which a comparable fee is not shown, are referred to this committee for assessment.

This committee apparently takes its guidance purely from the existing fee schedule so that no increase in the level of any one fee can be anticipated until the over-all level is raised.

As yet, statistics are not available for the year 1949 upon which to compare a percentage increase. These figures of the over-all cost of medical care seemingly are not published for a full year after the termination of the fiscal year, and this precludes arriving at any conclusions at this time.

Fees now obtaining are more than ever inadequate in the light of existing conditions. For that reason, further negotiations to increase the fee schedule are in order, despite lack of certain statistical figures.

Respectfully submitted.

H. Funk,
Chairman.

Workmen's Compensation Board Medical Referee Committee

To the President and Executive of
The Manitoba Medical Association:

43.

I beg to submit the following report:

From October 1, 1949, to October 1, 1950, the Medical Referee Committee met on fifteen occasions. A total of forty-six patients were reviewed. No matters of unduly contentious nature were encountered.

Respectfully submitted.

C. E. Corrigan,
Chairman.

Manitoba Cancer Relief and Research Institute

To the President and Executive of
The Manitoba Medical Association:

44.

(The M.M.A. Representatives to the Cancer Relief and Research Institute constitute the Cancer Committee.)

It will be recalled that the question of a proposed plan, whereby patients from rural Manitoba would receive special consideration if suffering from Cancer, was inconclusively discussed at the previous Annual Meeting of the Association. The Executive of the Manitoba Medical Association was empowered to proceed with negotiations during the current year, and this order was diligently carried out. Committees and sub-committees, and working committees of both bodies, namely, your Association and the Cancer Relief and Research Institute, were struck, met, engaged, adjourned, reconvened, reported back, started over again, re-organized, reconsidered, reviewed, and finally agreed on a proposal which, it is hoped, will be implemented during the current calendar year.

45.

The number of meetings held is uncertain but approached legion. The Association, in the first instance, submitted to the Institute a plan designed to deal with the diagnosis of all rural cancer suspects. It was proposed to establish Cancer Clinics to supplement present diagnostic facilities as they now exist in the office of every medical practitioner. Payment was to be made by the Institute to the doctors and hospitals on a fee-for-service basis.

46.

A study of this plan by the Institute led them to the conclusion that financially they would be unable to implement it. They, therefore, requested the Association to prepare another plan designed to cover only those rural suspects who are "medically indigent." These consist of people who are not so poor as to be wards of Government, not so prosperous as to justly be called on to defray their own medical expenses. The salient features of this plan were embodied in the form of an agreement which was concurred in by both parties. It is reproduced in full herewith:

47.

WHEREAS THE MANITOBA CANCER RELIEF AND RESEARCH INSTITUTE, hereinafter called "The Cancer Institute" has, amongst other objectives laid down in its Act of Incorporation, the following:

(1) To take such steps as may be considered advisable by the Board for the relief or cure of cancer in the Province of Manitoba,

(2) To assist in establishing and operating a clinic or clinics in hospitals or institutions for the examination and diagnosis and/or treatment of persons in the Province of Manitoba, afflicted or suspected of being afflicted with cancer,

(3) Correlating and co-ordinating, by voluntary means, all agencies in the Province having like objectives,

AND

48.

WHEREAS THE MANITOBA MEDICAL ASSOCIATION, representing the medical practitioners of the Province of Manitoba, has the following as some of its objectives:

(1) the improvement in the diagnosis and treatment of cancer,

(2) the constant improvement in the competence of its own members so that the services provided will always be of a high order.

(3) the support of all endeavours that will achieve early diagnosis and treatment of patients,

(4) the provision, free of charge, of medical personnel through the out-patient department and public ward teaching departments of the public hospitals, for the diagnosis and treatment of all those who are indigent or near-indigent,

(5) the maintenance of the field of private medical practice for those patients who are able to provide for themselves,

AND

49.

WHEREAS THE UNIVERSITY OF MANITOBA, has amongst other responsibilities, that of training medical students in the examination, diagnosis and treatment of persons afflicted or suspected of being afflicted with cancer,

AND

50.

WHEREAS THE WINNIPEG GENERAL HOSPITAL and ST. BONIFACE HOSPITAL are at present the only two teaching hospitals in the Province operating Tumor Clinics, and, as such, have amongst other responsibilities, that of the provision of services for the diagnosis and treatment of cancer patients and the provision of services for the training of undergraduate and graduate medical students in the field of cancer diagnosis and treatment,

AND

51.

WHEREAS it is recognized that, at a later date, other hospitals may wish to provide similar services,

THEREFORE

it is agreed that the Cancer Institute, under its authority (Section 3 above) should undertake to correlate and co-ordinate the activities of all these existing agencies in respect to their common objectives in the field of cancer control, and at such later date as other clinics in teaching hospitals may evolve, to integrate them in the over-all plan on the same basis as the Winnipeg General Hospital and St. Boniface Hospital are then operating.

AGAIN,

52.

WHEREAS these four agencies have agreed that enhanced instruction in cancer diagnosis and treatment is an essential step in the achievement of cancer control,

AND

53.

WHEREAS it is also agreed that the existing tumor services in the Winnipeg General Hospital and St. Boniface Hospital—

(1) provide an essential service for instruction in cancer diagnosis,

(2) provide necessary diagnostic services for those residents of the Greater Winnipeg area who, through economic reasons, have not direct access to the services of physicians provided through the medium of private medical practice,

(3) provide, in an efficient manner, health services of inestimable value, by utilizing the services of the physicians, entirely without remuneration,

AND

54.

WHEREAS it is agreed:

(1) that there exist certain social groups in the rural areas of the Province, whose economic circumstances, combined with their geographical location, make it desirable that they have, through the medium of their local physician, ready access to tumor services of the above type,

(2) that the principle of operation of the existing tumor services be extended to cover the above-mentioned rural groups,

(3) that cancer patients who are, themselves, financially able to provide for diagnosis and treatment, and cancer patients who are now being paid for by the Government in regard to their medical care, are completely outside the scope of the above arrangement,

(4) that such an extended service would enhance instruction in cancer diagnosis and treatment, and would also ensure that all residents in the rural areas of the Province receive adequate diagnosis in a manner comparable to that now available for the urban population, namely, private patients through private medical practice and public patients, certified as requiring financial assistance, through expanded tumor services,

(5) that in expanding the scope of these tumor services, private physicians serving on these should be free to retain their voluntarily assumed obligation of providing their medical services for the underprivileged without recompense,

(6) that the expenses incurred by the hospitals in supplying diagnostic services for rural public patients served by the expanded tumor services, be met by funds from the Cancer Institute,

(7) that the Cancer Institute should join with the University in underwriting any increased costs that may be involved in further utilizing the tumor services as teaching centres.

AGAIN,

55.

WHEREAS it will become necessary to determine which rural cancer suspects should use the services of cancer consultants in private practice, and which require the services of the physicians freely donated to the tumor services,

AND

56.

WHEREAS this can, in the first instance, be done by the rural physician because of his knowledge of the costs involved, and by the rural municipal authority because of his knowledge of the financial circumstances of the patient,

THEREFORE

such joint certification will serve to introduce patients to the admitting personnel of the tumor services, which personnel shall hold the ultimate authority controlling admission to the services as now obtains re the admission of patients to the out-patient department and indoor staff beds,

AND

57.

WHEREAS it is recognized that the operating costs of the services can be determined only after trial, and that the execution of the above plan may bring to light problems and difficulties that at present are not clearly visualized,

THEREFORE

it is agreed that this plan should be initiated upon an experimental basis for a period of two years, and be subject to review in the light of the information gained at the end of one year,

AND

58.

WHEREAS the foregoing is an agreement of general policy to which each contracting party subscribes in good intent,

AND

59.

WHEREAS the execution of this policy properly lies under the jurisdiction of the Cancer Institute, according to its authorities (1) and (2) outlined above,

AND

60.

WHEREAS the execution of this policy will involve definite working agreements between the Cancer Institute and the other agencies involved,

THEREFORE

it is agreed that the Cancer Institute should execute working agreements between itself and the other agencies involved.

Meanwhile the Institute is actively engaged in implementing this plan.

Respectfully submitted.

C. E. Corrigan,
on behalf of
F. G. Stuart,
Chairman, M.M.A. Cancer Committee.

Historical Medicine and Necrology

To the President and Executive of
The Manitoba Medical Association:

61.

Your committee regretfully reports the passing of the following members of the Manitoba Medical Association since the last Annual Meeting:

Doctors Frank Woodside Boyd, Margaret Ellen Douglass, McGillivray Stuart Fraser, Omer Grenville Hague, Edward Alfred Jones, John Angus MacDougall, James Currie McMillan, Robert Sidney McMunn, Benjamin Aaron Victor, all of Winnipeg.

Doctors Andrew Allan Alford, Oakville; Clifford Bruce Colquette, Snow Lake; William Vincent Edwards, Roland; Clarence Woods Johnston, Elkhorn; Arthur Larose, The Pas, and Fred Carlyle Wilson, Melita.

Although we bid them farewell, their memory remains, not in our hearts alone, but in the minds of those afflicted ones whom they served. In the presence of the dignified anonymity of death, we feel that any special comment would be improper. We would not wish it for ourselves: but as we who read their names consider that ours will inevitably be noted here some day, let us take this moment to resolve that the remainder of our life, both professional and personal, will be lived so that we may be regarded with the affection and esteem that we regard these our colleagues who have left us to receive their reward.

Respectfully submitted.

Athol R. Gordon,
Chairman.

Legislative Committee of Fifteen

To the President and Executive of
The Manitoba Medical Association:

62.

Only one meeting of this Committee was held in 1950, this being hurriedly called on April 20th.

Information had been received that day that a Bill to amend the Workmen's Compensation Board Act had received first reading that morning, and was likely to receive second reading in the evening session. Details of the Bill were not available, since it was still not printed, but the local Press intimated that the amendments were designed to admit both Chiropractors and Osteopaths under the Act.

The meeting felt that such a change was not in the best interests of the injured workman, since Chiropractors, under their licence, do no surgery, and Osteopaths are limited to minor surgery only. To permit an injured workman to report directly to such practitioners might result in delay or even neglect in instituting adequate treatment.

The measure was introduced by the Minister of Labor and was, therefore, assured of government support. It was introduced in the dying moments of the session, and had already had first, and possibly second reading. Any organized resistance to the bill was out of the question.

63.

A letter was drafted by the Committee, deprecating the "railroad tactics" in pushing the Bill through, and suggesting a six-month delay for further study of the bill. This was to be sent to the Premier and all members of the Cabinet, and to some of the opposition members.

It was also decided to have our Executive Secretary and our solicitor wait on the Law Amendments Committee, if our solicitor considered this advisable. Our solicitor, however, felt that a letter was all that could be of any value at the present. This was amended somewhat by our solicitor, and forwarded to the members previously mentioned.

The Bill passed third reading on April 22, 1950.

Our only means of obtaining advance notice of legislation that might affect the medical profession has been through the office of the Minister of Health. This method has worked satisfactorily in the past.

It is of passing interest that on the occasion of the one bill which really interested the profession being brought before the house, the daily copies of proceedings were inadvertently delayed in reaching us until all possibility of effective resistance had passed.

All of which is respectfully submitted.

Ross H. Cooper,
Chairman.

Extra Mural

To the President and Executive of
The Manitoba Medical Association:

64.

We can again report that most requests from District Societies for speakers for local meetings have been made through the Association Office and this Committee.

A review of the dates of meetings of the various District Societies has shown a tendency to grouping of the meetings in some of the Districts. It has been suggested to the District Societies that, if they can provide this committee with a rough time-table of their projected meetings for the year, it may be possible to offer them an even more interesting and varied selection of speakers.

Your committee wishes to express its sincere appreciation of the co-operation and help it has received from the Association Office throughout the year, and in particular, during the period of the spring floods when your committee was completely occupied with this emergency, and the Executive Secretary dealt with any matters that arose during this period, in spite of the fact that he also was deeply involved in flood.

The following is a list of meetings, speakers and their subjects:

Brandon and District Medical Association:

November 16th, 1949, at Neepawa:
- Dr. J. P. Gemmell—"Radioactive Isotopes."
- Dr. A. Hollenberg—"Recent Work in Experimental Diabetes."
- Dr. Murray McLandress—"Problem in Premature and Infant Feeding."

Central District Medical Society:

December 12th, 1949, at Portage la Prairie:
- Dr. A. B. Houston—"Cardia Arrythmias with Special Reference to Quinidine."
- Dr. C. W. Clark—"Diseases of Anus and Rectum."

April 25th, 1950, at Portage la Prairie:
- Dr. Cecil Harris—"Function, Organization and Operation of a Blood Transfusion Service."
- Dr. A. T. Mathers—Presented several Clinical Cases Demonstrating Unusual Neurological Conditions, also Discussion on Epilepsy.

Northern District Medical Society:

November 9th, 1949, at Dauphin:
- Dr. L. R. Coke—"Complications of Coronary Disease."
- Dr. K. R. Trueman—"Surgical Conditions of Anus and Rectum."

June 6th, 1950, at Dauphin:
Symposium on Biliary Diseases:
- Dr. I. Pearlman—"Medical Aspects."
- Dr. S. S. Peikoff—"Surgical Aspects."
- Dr. J. M. Lederman—"Pathological Aspects."

North of 53 District Medical Society:

March 8th, 1950, at Flin Flon:
- Dr. H. Morison—"X-Ray Investigation of the Gastrointestinal Tract."
- Dr. R. O. Burrell—Conducted a question-answer period on Surgical Problems, including Chronic Varicose Ulcer, Hirschspring Disease, Congenital Megacolon.

Northwestern District Medical Society:

November 2nd, 1949, at Russell:
- Dr. A. T. Gowron—"Manitoba Medical Service."
- Dr. B. E. Loadman—"Ruptured Intervertebral Disc."

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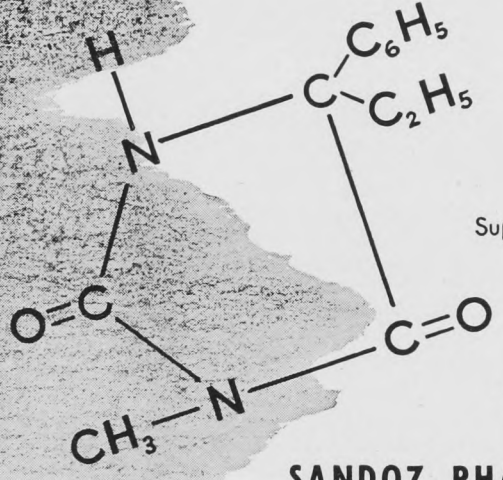

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June 7th, 1950, at Russell:

Dr. T. A. Lebbetter—"Coronary Artery Disease."

Dr. C. B. Stewart—"Diagnosis and Treatment of Common Urethra Congenital Conditions."

Dr. J. R. Martin—"Aims, Objects and Achievements of the General Practitioners' Association."

Respectfully submitted.

Paul K. Tisdale,
Chairman.

Maternal Welfare

To the President and Executive of
The Manitoba Medical Association:

65.

Your committee wishes to report as follows for the year 1949:

The maternal death rate was 1.3 per 1,000 live births (there were 19,459 live births in 1949). The figure for 1947 was 1.1, and for 1948 it was 1.4.

The causes of death were:

1. Toxaemias of Pregnancy	9
2. Haemorrhage	3
3. Pulmonary Embolism	3
4. Ectopic Pregnancy	3
5. Abortion with Infection	2
6. Lobar Pneumonia	1
7. Undiagnosed (no doctor)	2
Total	23
8. Associated Maternal Deaths	3

The causes of death in the associated cases were:

1. Mitral disease.
2. Diabetes Mellitus.
3. Measles.

66.

The case records supplied by the Division of Statistics, Department of Health and Public Welfare, were studied. The following points were noted:

1. Place of Residence:

Cities	4
Towns	5
Municipalities	7
Local Government Districts	2
Indian Reserves	5

2. Place of Death:

City Hospitals	8
Other Hospitals	9
Home and Others	6

3. Four patients in Indian Reserves had no doctor in attendance.
4. Fifteen patients had no pre-natal care.
5. Autopsy was performed in six cases.

Toxaemia of Pregnancy was the largest single factor, accounting for 34.6% of the deaths. Of the nine cases, four had no pre-natal care.

As has been suggested in a previous report, it would be helpful to have the Pathologist's findings filed with the Division of Statistics.

Respectfully submitted.

C. C. Henneberg,
Chairman.

Editorial

To the President and Executive of
The Manitoba Medical Association:

67.

During the past year the Review has maintained the quantity and quality of its contents. The present volume, though of only ten issues, will not fall short of last year's in size. It may be explained that the combining of the June and July, and of the August and September numbers was largely for the purpose of giving Mr. Whitley a break of a few weeks. For some years he has had little opportunity to leave his desk, so increased has been the work associated with our large journal.

Our chief and continuing difficulty is the accumulation of a backlog. Its absence sometimes delays publication, often prevents that even balance of articles which we desire, and always aggravates the difficulties of our task. Yet, with co-operation, this difficulty could easily be overcome. Were we to get all the papers delivered at the Convention and all those presented at the meetings of the Winnipeg Medical Society, we would almost have enough. The presentations at hospital luncheons are worthy of permanent record and are, moreover, likely to be of interest and value to those unable to attend. Further, there are many sectional, district and special meetings, when useful papers are read, but which remain unprinted. It would be no hardship for each member of the Faculty of Medicine to prepare a single short contribution, yet, if that were done, it would assure us of more than a dozen papers each month. With such a wealth of material available, our difficulty should be to choose, not to gather.

Our purpose has always been to regard the Review as a mirror in which is reflected what is being done, medically, in Manitoba. It should bring the city to the country. It should be a record of what was said at meetings, for the refreshment of the memories of those who heard, and for the information of those who did not hear. It should also be a means of making known elsewhere what is being done in one of the largest medical centres in the Dominion. The many requests for reprints that come to us from this continent and abroad is evidence that we have interested readers on all the continents. We wish to extend our scope and could certainly do so were we assured of a sufficient number of contributions.

We wish to thank all our contributors and are grateful to those who have assisted us, especially Dr. Peikoff, who has spared neither time nor money in gathering material. Dr. Ruvin Lyons, Dr. Israels, Dr. Penner, Dr. Whitehead and Dr. Green have helped us greatly. Dr. Borthwick-Leslie deserves special note, so popular is her page, and we must thank Dr. Ross Mitchell for his notices about those whose work is ended.

As always, we owe a large debt to Mr. Whitley whose work has contributed so much to the success of the Review, and we also thank the advertisers who make publication possible.

Respectfully submitted.

J. C. Hossack,
Chairman.

Editorial Board, C.M.A. Journal

To the President and Executive of
The Manitoba Medical Association:

68.

During the past year the following Manitoba physicians have contributed to the Canadian Medical Association Journal:

Vol. 61, July to December, 1949

Adamson, J. D., with J. C. Wilt and others—"Poliomyelitis in the Arctic."

Birt, A. R.—"Infantile Eczema."

Chown, B.—"Never Transfuse a Woman with her Husband's Blood."

Cameron, H. F., with O. S. Waugh—(See under Waugh).

Colbeck, J. C.—"Staphylococcal Infections in Maternity Units."

Decter, P. H., with E. S. James—(See under James).

Gilmour, C. R., with M. B. Walters—"Thyrotoxic Heart Disease."

James, E. S., with P. H. Decter—"Cervical Disc Syndrome."

McGuinness, F. G., with G. S. Musgrove—"An Epidemic of Puerperal Mastitis."

Musgrove, G. S., with F. G. McGuinness—(See under McGuinness).

Sheppard, F. A. B.—"Chronic Duodenal Ulcer."

Walters, M. B., with C. R. Gilmour—(See under Gilmour).

Waugh, O. S., with H. F. Cameron, Scarrow, H. G. and Howarth, J. C.—"Follow-up on Lumbar Disc Lesions."

Waugh O. S., with H. F. Cameron, Howarth, J. C., and Matas, J.—"Prefrontal Leucotomy for Painful Phantom Limb."

Wilt, J. C., with J. D. Adamson—(See under Adamson).

Vol. 62, January to June, 1950

Cherniak, L.—"Chest Movements in Respiratory Diseases."
Corrigan, C., with Segal, S.—"The Incidence of Congenital Dislocation of the Hip at Island Lake, Manitoba."
Earn, A. A.—"Macroscopic Examination of the Placenta."
Earn, A. A., with D. W. Penner—"Evaluation of Vaginal Cytologic Smears in the Diagnosis of Uterine Cancer."
Medovy, H.—"Well-water and Methaemoglobinaemia in Infants."
Penner, D. W., with Earn, A. A.—(See under Earn).
Perry, W. F., with Gemmell, J. P.—"Use of Radioactive Iodine in Diagnosis of Hyper-and-Hypo-Thyroidism."
Gemmell, J. P., with Perry, W. F.—(See under Perry).
Segal, S, with C. Corrigan—(See under Corrigan).

Manitoba Notes and Winnipeg Medical Society Notes have appeared regularly in the Journal.

Respectfully submitted.

Ross Mitchell, Chairman

Credentials and Ethics

To the President and Executive of
The Manitoba Medical Association:

69.

The committee consists of three members, two living outside of Winnipeg, Dr. J. C. Rennie of Portage la Prairie, and Dr. R. P. Cromarty of Brandon.

There was no occasion requiring the calling together of the committee, until very recently a matter was brought to the attention of the Manitoba Medical Executive by the Workmen's Compensation Board re Chiropractors taking x-ray films in the course of their examination of claimants. The Board is of the opinion that the Radiologists should be asked to interpret these films in a similar manner they now interpret films submitted by doctors and hospitals.

It being so close to the time of the Annual Meeting, I think the members of the Association should be asked to give an opinion in this matter, or that the Radiologists express their viewpoint. The incoming committee could then take action as suggested.

All of which is respectfully submitted.

I. O. Fryer, Chairman.

Industrial Medicine

To the President and Executive of
The Manitoba Medical Association:

70.

I herewith submit report for the year ending September, 1950.

A meeting of physicians interested in the various phases of Industrial Medicine was called December 8, 1949. The need was expressed for the development of two specific projects.

The first of these dealt with the profession alone. It was felt that some thought should be directed to the development of a basic model Industrial Medical Program representing the fundamental policies, plans and scope, as envisaged by Manitoba physicians interested in this type of work. It was emphasized that some degree of agreement at this level was necessary before any group approach was made to Manitoba Industry.

The second dealt with Management and Labor. Here it was felt the medical profession of this area had a responsibility to indicate to industry what services were available, and how they might be obtained. It was pointed out that Management, sensitive to employee welfare programs, is receiving, through business periodicals, personnel offices, etc., continual stimulation towards the development of Plant Medical Services, and that it is only when the medical profession is contacted that there appears to be wide diversity of opinion regarding plans, programs, costs, etc.

A request from the Provincial Department of Labor for the revision of its existing first-aid equipment schedules was passed on to the group.

Respectfully submitted.

Hugh Malcolmson, Chairman.

Fee Committee

To the President and Executive of
The Manitoba Medical Association:

71.

This Committee was appointed by the Executive of the Manitoba Medical Association on the request of the Manitoba Medical Service. It was to consist of three members, one to be a general practitioner, one to be a specialist, and the third to be the President of the Manitoba Medical Association.

At present it consists of Dr. D. L. Scott, President, Manitoba Medical Association, Dr. P. H. McNulty and Dr. C. H. A. Walton. The Executive Secretary of the Manitoba Medical Association and the Executive Director of the Manitoba Medical Service sat with the Committee in an ex officio capacity.

The Committee has met on eleven occasions and has considered fee revisions and new fee schedules submitted by the Urologists, the General Practitioners' Association, the Neurological Surgeons, the Section on Eye, Ear, Nose and Throat, the Section of Orthopaedics and the Dermatologists. In addition, several submissions from the Manitoba Medical Service were made. The Committee considered each problem in the light of its effect on the Manitoba Medical Service as a whole. All of its decisions were unanimous. The findings were all submitted to the Executive of the Manitoba Medical Association and, in all cases, were ratified and forwarded to the Manitoba Medical Service for implementation.

The work of the Committee is onerous and time-consuming, but it is the belief of its members that a useful service is being rendered.

All of which is respectfully submitted,

C. H. A. Walton,
Chairman

Medical Education

To the President and Executive of
The Manitoba Medical Association:

72.

This Committee met to consider two problems:

The first was membership of the Manitoba Medical Association in the National Film Association of Canada. According to information available, the National Film Association of Canada does not have an established board of medical advisors and, under these informal conditions, it is not considered feasible for the Manitoba Medical Association to take membership officially in this institution.

The second problem was the consideration of the report of the National Committee on Medical Education. This report covered a variety of subjects, most of which were covered in a medical paper to all the members of the Provincial Committee.

(1) The local committee agrees that interneships or undergraduate medical students with general practitioners should be given a limited approval.

(2) The Committee agrees with the stand of the Canadian Medical Association group on the future roles of physicians from Central European countries and feels that in future consideration of this problem should be left with the College of Physicians and Surgeons of Manitoba, in whose hands licensing rests.

(3) In the matter of supply of physicians in Canada, this Committee feels that the shortage of teachers, especially of full-time teachers, is the main problem and that it is not feasible to open new medical schools until the supply of teachers can be assured.

(4) In the matter of availability of patients in hospital for teaching, this committee urges that the widest possible use of hospital patients should be made for teaching, and that all patients in hospital under insurance schemes, as well as all indigent patients, should be used for teaching purposes.

(5) The Committee discussed the question of whether or not examinations should be held at the end of the fourth year and before interneship. The committee recognizes that

lack of uniformity in this practice has been a matter of hardship for Manitoba physicians undertaking postgraduate courses but, as this matter is at present under consideration by the University Faculty Council, this committee feels that no representation from the Manitoba Medical Association is necessary.

All of which is respectfully submitted.

L. R. Coke,
Chairman.

Group Insurance

To the President and Executive of
The Manitoba Medical Association:

73.

Policyholders of the Group Accident and Sickness Insurance for the Manitoba Medical Association at the present time number three hundred and fifty-four (354), which represents more than fifty percent of the total membership of the Association. There have been thirty new additions since the original enrollment period of December, 1948, while deaths and lapses have accounted for a loss of eighteen.

Nineteen thousand and eighty-six dollars and twenty-six cents ($19,086.26), representing a total of forty-four claims, has been paid out to date. This, of course, does not include claims being processed and the balance of indemnity payments to be made to claimants who are still disabled.

It is interesting to note that this year both the Saskatchewan Medical Association and the Alberta Medical Association are considering the institution of a similar policy for the benefit of their members.

As far as can be ascertained, complete satisfaction has been expressed by all members who have made any claims. In addition, the Insurance Company has expressed its appreciation of the co-operation shown by these claimants, and has expressed its satisfaction with the progress of the scheme to date. The endorsement of the continuation of this policy is heartily recommended.

Respectfully submitted.

Lawrence R. Rabson,
Chairman.

Sanatorium Board of Manitoba

To the President and Executive of
The Manitoba Medical Association:

74.

During the past year, several meetings of the Manitoba Sanatorium Board have been held, to hear reports from their Sanatoria. The diagnosis and treatment of the tuberculous person remains at a high standard. There is also an increased interest in research, and many new investigations are being carried out. The Tb. survey is bringing to light new cases of tuberculosis and, equally important, many non-tuberculous lesions are being discovered and treated. This is a great help in detecting new and early cases of cancer of the lung.

Respectfully submitted.

M. B. Perrin,
Representative.

Public Relations

To the President and Executive of
The Manitoba Medical Association:

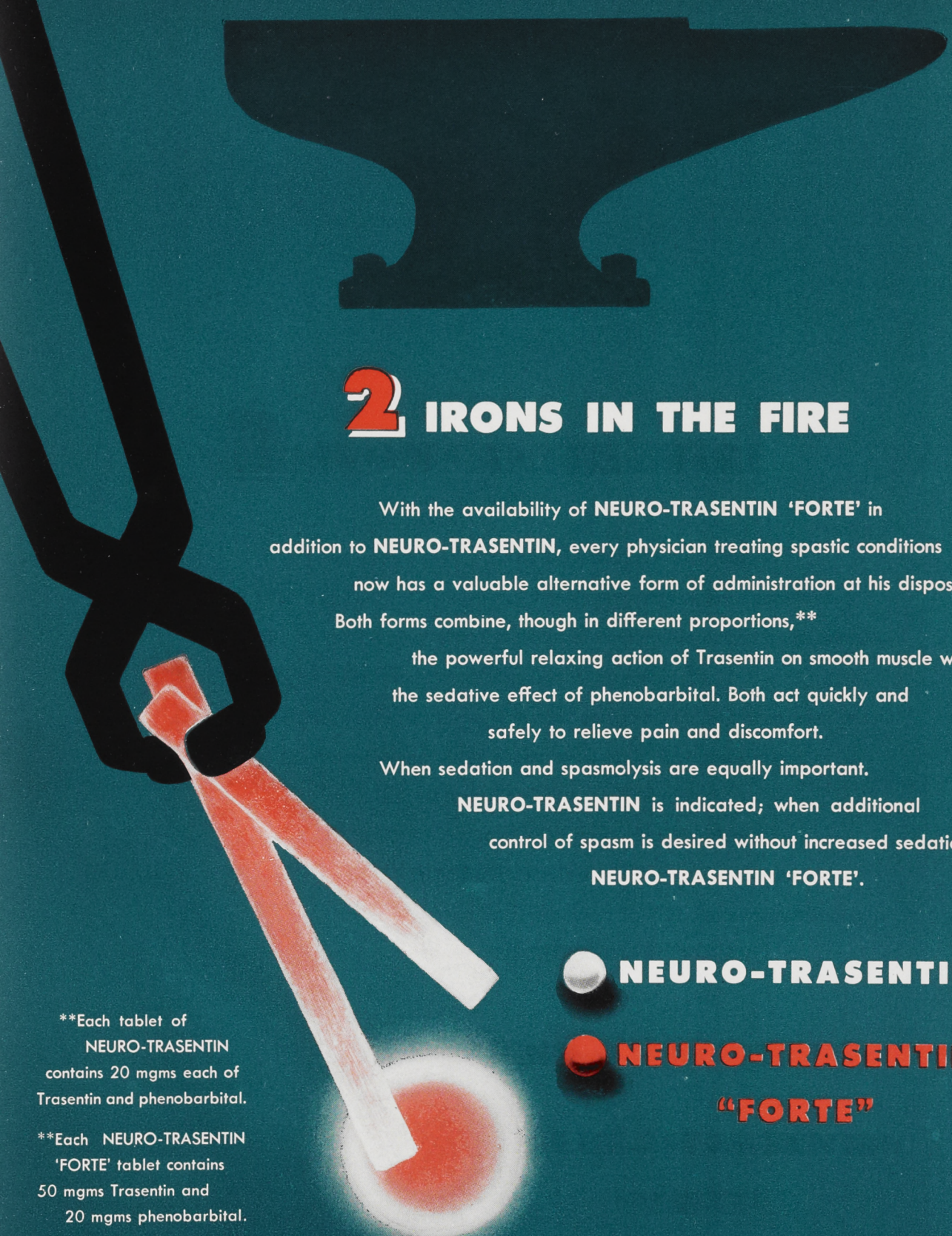
75.

This committee was appointed during the year to deal with local conditions as they arose and to implement suggestions of the new Public Relations Committee of the Canadian Medical Association.

To date, the work done has largely been liaison with the Manitoba Medical Service. Other activities are pending.

Respectfully submitted.

F. G. Allison,
Chairman.



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When sedation and spasmolysis are equally important. **NEURO-TRASENTIN** is indicated; when additional control of spasm is desired without increased sedation, **NEURO-TRASENTIN 'FORTE'.**

NEURO-TRASENTIN

NEURO-TRASENTIN "FORTE"

**Each tablet of NEURO-TRASENTIN contains 20 mgms each of Trasentin and phenobarbital.

**Each NEURO-TRASENTIN 'FORTE' tablet contains 50 mgms Trasentin and 20 mgms phenobarbital.

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*Ciba's brand of adiphenine-phenobarbital

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begins at 40

The menopause need no longer be a period of storm and stress for the average woman. With the aid of a highly potent œstrogenic preparation such as ETICYLOL LINGUETS, replacement therapy can be effected quickly, conveniently and economically. Because of their extremely high potency and because their œstrogenic content is *directly* absorbed into the systemic circulation, ETICYLOL LINGUETS provide the physician with a complete substitute for expensive and often inconvenient parenteral administration. As the direct result of this high potency, very low dosage, with its resultant economy, is made possible. For example, rapid relief of symptoms can be obtained initially with one 0.05 mgm. ETICYLOL LINGUET, once to three times a day and control maintained with one 0.01 mgm. ETICYLOL LINGUET twice daily. Equally important too, is the fact that ETICYLOL LINGUETS produce the sense of well-being and strength in a patient so sought after in all menopausal therapy.

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EDITORIAL

J. C. Hossack, M.D., C.M. (Man.), Editor

At the recent meeting of the C.M.A. the following resolution was passed by the General Council:

"Re General Practitioner Licenses

"WHEREAS THE MEDICAL PROFESSION IS SUBJECT TO MUCH criticism through practitioners attempting procedures for which they have been inadequately trained;

"AND WHEREAS it is not in the best interest of a high standard of medical care that they should do so;

"AND WHEREAS we as a profession, through the medical staffs of our hospitals, recognize the need for additional training before permitting a practitioner to carry out many procedures which he is presently licensed to do;

"THEREFORE BE IT RESOLVED that the Council of the Canadian Medical Association recommend to the various licensing bodies of Canada and to the Association of Canadian Medical Schools that an immediate study be made of the need, advisability and method of granting what might be known as a general practitioner license to applicants having the minimum requirements for licensure."

This resolution should be carefully studied by every practitioner because of its implications.

The first clause states that there has been "much criticism of the profession through practitioners attempting procedures for which they have been inadequately trained." This is not very clear. How much is "much?" Who are the critics? What are the "procedures?" medical, surgical or obstetrical?

Who except the most recent graduates have had any training in the use, say, of the newest anti biotics, anti couglants, etc.? Doctors read about these new remedies, try them out and so learn how to use them. With medicine progressing at its present rate everyone must learn for himself and must teach himself how to apply the newest remedies and methods.

But after all it is experience that teaches. Everyone who advances must do so by feeling his way from the known that he has been taught to the unknown that he must discover for himself. It is not the function of a school to give each student all knowledge but to instruct him how he may soundly and safely extend his knowledge and so gather more. If by adequate training be meant complete training then no graduand has it in any subject. But if by adequate be meant a sufficiency of basic knowledge, a familiarity with basic principles and fundamental facts, then the graduands of today have it in a measure never equalled before.

For that reason practitioners of today are better able to serve the public than ever before. But they must be given every opportunity to gain experience especially in the gaining of manual dexterity for that comes only by doing. If they are to be restricted in their surgical procedures the dexterity they need for efficiency will come slowly and their efficiency will be reduced.

How many practitioners are in the habit of attempting procedures that are beyond their scope? We venture to say very few. An honest doctor will do nothing to put his patient in jeopardy and doctors, with few exceptions, are honest. They become expert by experience but they gather that experience by working with those who are expert. The safeness of surgery, the decline of mortality and morbidity after operation is bragged about and this happy state of affairs could not exist if practitioners, who do a vast amount of that surgery, were reckless and irresponsible. And especially in these days, when everyone is uncomfortably busy, there is little inducement for any practitioner to tackle single handed a problem with which he is unfamiliar.

The third clause of the resolution is to the effect that hospital staffs are particularly aware of the practitioner's need for extra training before he can be permitted to use hospital facilities. That, on the surface, is a suggestion to close the hospitals to all who have not taken special training. Again the practitioner's inadequacy may be medical, surgical or obstetrical. So long as one remains in general practice he is liable to fall down in any department. The only solutions are, 1. that each practitioner be furnished by the medical staff with a list of things he can and cannot do, or 2. that the hospital be closed. In doing the former the staff would be placing itself above the law which, rightly or wrongly, accepts medical training as adequate; in doing the latter it would render much of the practitioner's training useless and would give him little opportunity to learn while he earns.

And how does this fit in with the Government's plan to open more and more hospitals in order to coax men to practice in the country? Is there to be a one standard of training for city doctors and another for country doctors, with the former being excluded from hospital practice while his country cousin enjoys it?

The suggestion is that the law be changed to permit of a general practitioner's license which presumably would be of lower standard than the present license—something like the qualification held a century or so ago by apothecaries. It would limit the scope of the practitioner and would therefore lead to many going into specialties be-

cause who would want no more than such a minimal standing? And what about the country doctors whose scope is remarkably wide? How could they tackle the daily emergencies if their training (already inadequate we are told) is to be further reduced?

The law as it stands has faults but all over the world practically the same law applies. What is proposed is an oddity, justifiable only if our doctors are not to be trusted.

New Product, Sucaryl Sodium

A new heat-stable, non-caloric synthetic sweetening agent which is reported to be highly beneficial in restricted and low calorie diets such as those followed by thousands of diabetics and reducers in this country is now being manufactured in Canada by Abbott Laboratories Ltd.

Known as SUCARYL Sodium (cyclamate sodium, Abbott), it contains 125 mg. of sodium cyclohexyl sulfamate, 269 mg. of sodium bicarbonate, and 240 mg. of tartaric acid.

The new sweetening agent has the ability to sweeten foods without adding forbidden calories or carbohydrates to the diet. Previously saccharin was the only non-caloric sweetener available, but is decomposed by heat required for cooking which causes it to lose its sweetness, and is also frequently described as having a bitter after-taste when used in drinks and uncooked foods. Sucaryl has no bitter after-taste when used in ordinary proportions. Being heat-stable, it can be used in cooking, baking or canning, and performs its sweetening function even in boiling solutions.

With the development of Sucaryl it is now possible for diabetics and reducing patients to include a wide variety of foods in their diets which were formerly restricted because of sugar content and not possible with saccharin because of its instability. It is stated that Sucaryl will also simplify the problem of having to prepare a special diet for one person because food and drinks sweetened with Sucaryl are equally palatable to all members of the family.

Sucaryl will be supplied in tablet form, with each eighth-gram tablet equivalent in sweetening power to one teaspoonful of sugar. The tablets are effervescent to reduce dissolving time to a matter of seconds in warm solutions. Each tablet is grooved for easy separation to suit individual tastes. The tablets will be packaged in handy bottles of 100 tablets, as well as bottles containing 1,000 tablets. They will be available to the public at drug stores only.

Although Sucaryl will be prescribed or recommended by physicians it will also be available without prescriptions. However, because it will be used continually by people in all states of health a precautionary limit of eight tablets per day has been imposed for each user. And because sodium salts are relatively slowly eliminated, it is advised that patients suffering from severe kidney ailments take Sucaryl in moderate amounts and only under doctor's supervision.

The discovery of Sucaryl began in 1937 when Michael Sveda, a chemist working for his doctor's degree at the University of Illinois, noticed a strange sweet taste in his cigarette. Anxious to find what caused the sweetness, he tasted all the compounds on his laboratory bench and found the source to be sodium cyclohexyl sulfamate, a new compound he had synthesized. He continued to study the synthesis of cyclohexyl sulfamates and the potential value of their sweetening properties. Becoming a research chemist for a large American organization in Cleveland, following attainment of his doctorate, he interested his new employer in continuing experiments so that his discovery might be developed.

In 1940 Abbott Laboratories became interested in the compound for its possible use in diabetic diets. After obtaining samples for study and evaluation, the firm was granted a license by the patent owners. Although little development was possible during the war, a long series of pharmacological experiments, clinical studies and research, was begun immediately following the end of hostilities.

Exhaustive tests, which included continuous administration through three generations of rats, proved the compound to be well tolerated with no harmful side-effects, and clinical investigators reported uniform acceptance in human patients, noting that the great majority of patients showed a decided preference for the taste of Sucaryl as compared with that of saccharin.

TRIPLE ANTIHISTAMINE

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COMPOUND

for the histamine basis of allergy

1. Thepryl — Chemical competition
2. Desoxyephedrine — Stimulation of the sympathetic
3. Atropine — Inhibition of the parasympathetic

CAPSULE THEPRYL COMPOUND 25 mg.

Each capsule contains;

Thepryl (Chlorothenylpyramine Citrate)		25 mg.
Desoxyephedrine Hydrochloride		0.625 mg.
Atropine Sulphate	(1/2000 gr.)	0.032 mg.

CAPSULE THEPRYL COMPOUND 50 mg.

Each capsule contains;

Thepryl (Chlorothenylpyramine Citrate)		50 mg.
Desoxyephedrine Hydrochloride		1.25 mg.
Atropine Sulphate	(1/1000 gr.)	0.064 mg.

ALSO AVAILABLE

THEPRYL EXPECTORANT SYRUP AND CAPSULE

Each teaspoonful or capsule contains;

Thepryl (Chlorothenylpyramine Citrate)	15 mg.
Ammonium Chloride	2 grs.
Potassium Guaiacol Sulphonate	1 gr.
Sodium Citrate	1 gr.
Ephedrine Sulphate	1/16 gr.

OINTMENT THEPRYL COMPOUND

Thepryl (Chlorothenylpyramine Citrate)	2%
Calamine	10%
Zinc Oxide	5%
Camphor-Phenol	1%
Benzocaine	1%

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Professional Representative: Mr. J. R. Hope, 264 Lindsay Street, Winnipeg, Man.

Department of Health and Public Welfare

Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1950 July 16 to Aug. 12,'50	1950 June 18 to July 15,'50	1949 July 17 to Aug. 13,'49	1949 June 19 to July 16,'49	Total Jan. 1 to Aug. 12,'50	Total Jan. 2 to Aug. 13,'49
Anterior Poliomyelitis	3	0	18	8	6	42
Chickenpox	91	104	22	92	972	913
Diphtheria	0	0	0	3	5	15
Diphtheria Carriers	0	0	1	0	0	3
Dysentery—Amoebic	0	0	0	0	1	0
Dysentery—Bacillary	68	8	0	0	95	8
Erysipelas	3	1	1	1	32	19
Encephalitis	0	0	6	0	0	6
Influenza	6	11	8	11	114	186
Measles	47	62	79	288	1048	4939
Measles—German	0	13	4	4	31	95
Meningococcal Meningitis	3	1	0	3	11	18
Mumps	28	33	21	34	252	891
Ophthalmia Neonatorum	1	0	0	0	1	0
Pneumonia—Lobar	17	26	3	7	149	138
Puerperal Fever	1	0	1	0	3	4
Scarlet Fever	11	12	6	8	205	70
Septic Sore Throat	3	3	1	0	26	25
Smallpox	0	0	0	0	0	0
Tetanus	0	0	0	1	1	2
Trachoma	0	0	0	1	0	1
Tuberculosis	101	44	67	248	509	862
Tularemia	5	0	0	0	5	0
Typhoid Fever	0	2	1	1	3	7
Typhoid Paratyphoid	0	0	1	0	0	1
Typhoid Carriers	0	0	1	0	2	3
Undulant Fever	9	3	1	2	23	11
Whooping Cough	20	6	8	12	115	145
Gonorrhoea	140	96	125	125	724	858
Syphilis	18	30	35	34	162	274
Diarrhoea and Enteritis, under 1 yr.	10	12	32	40	76	181

Four-Week Period July 16th to August 12th, 1950

DISEASES (White Cases Only) *Approximate population.	*779,000 Manitoba	*861,000 Saskatchewan	*3,825,000 Ontario	*2,952,000 Minnesota
Anterior Poliomyelitis	3	8	60	63
Chickenpox	91	56	351	....
Diarrhoea and Enteritis	10	1	....	....
Diphtheria	....	....	2	1
Dysentery—Bacillary	68	....	3	1
Dysentery—Amoebic	....	....	1	5
Encephalitis Epidemica	....	1	1	....
Erysipelas	3	1	4	....
Infectious Jaundice	....	....	4	....
Influenza	6	....	6	5
Measles	47	48	748	84
German Measles	....	14	252	....
Meningitis Meningococcal	3	4	1	5
Mumps	28	95	348	....
Ophthalmia Neonatorum	1	....	....	....
Pneumonia Lobar	17	....	....	....
Puerperal Fever	1	....	....	....
Scarlet Fever	11	5	32	13
Septic Sore Throat	1	....	4	4
Tuberculosis	101	49	86	227
Tularemia	5	....	1	1
Typhoid Fever	....	3	3	1
Typhoid Para-Typhoid	....	....	1	....
Uudulant Fever	9	....	5	25
Whooping Cough	20	5	181	163
Gonorrhoea	140	....	313	....
Syphilis	18	....	70	....

DEATHS FROM REPORTABLE DISEASES

For the Month of July, 1950

Urban — Cancer, 55; Pneumonia Lobar (108, 107, 109), 1; Pneumonia (other forms), 2; Syphilis, 2; Tuberculosis, 4; Gastro-Enteritis and Colitis, 1; Lymphosarcoma, 1; Hodgkin's Disease, 3; Multiple Myeloma, 1. Other deaths under 1 year, 25. Other deaths over 1 year, 194. Stillbirths, 15. Total, 234.

Rural — Cancer, 28; Pneumonia Lobar (108, 107, 109), 3; Pneumonia (other forms), 3; Tuberculosis, 6; Gastro-Enteritis and Colitis, 2; Diarrhoea of Newborn, 1; Leukemia and Aleukemia, 2. Other deaths under 1 year, 17. Other deaths over 1 year, 166. Stillbirths, 16. Total, 199.

Indians—Influenza, 1; Pneumonia (other forms), 3; Tuberunder 1 year, 2. Other deaths over 1 year, 4. Stillbirths, 2. Total, 8.

♦

Poliomyelitis—At date of writing (August 31st) only seven cases have been reported and of these only three show paralysis.

Diphtheria—Seven cases reported from Winnipeg recently have raised our total to date for the year to twelve. None of these cases had been immunized with toxoid and this demonstrates the need to immunize **all** children and give booster doses when needed to keep their immunity at a high level.

Dysentery Bacillary continues to be reported in greater numbers than usual. This is no doubt due to more cases occurring and also to better diagnosis through increased use of laboratory facilities. In all cases of severe diarrhoea specimens of faeces and blood (with a brief clinical history) should be sent to the Provincial Laboratory for tests.

Tularemia—One case has been reported from east of Ste. Rose and four from the neighborhood of The Pas. We hope to print a short article in the Review in the near future.

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All controls on same operating level. Horizontal, continuous recording from large chart roll. Tracing always visible. Light swivelling telescopic arm provides quick easy adjustment of breathing tubes. Easily removed from cabinet for portable work.

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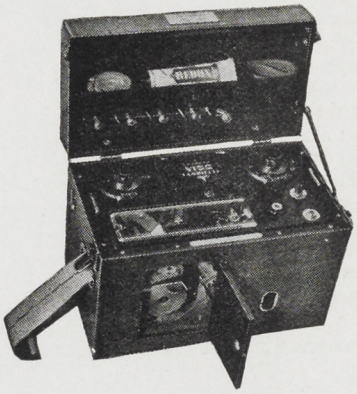
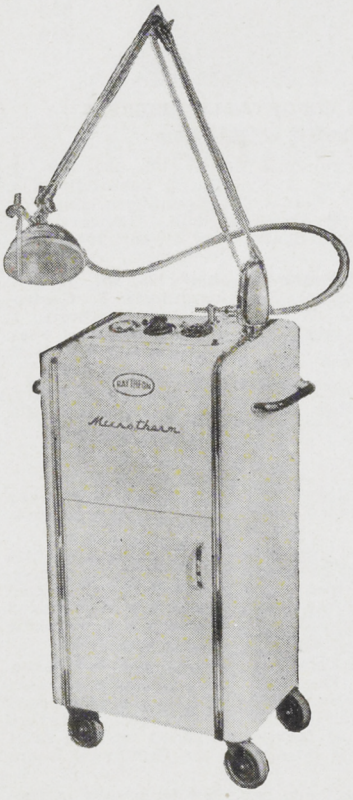
True rectangular coordinates; no curvatures of complexes or time lines. Independent synchronous time marker. Make timing (paper speed) check whenever you wish. Still faster galvanometer. Improved baseline steadiness despite voltage changes. Adjustment of writing pressure.





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COLLEGE OF PHYSICIANS AND SURGEONS OF MANITOBA

Business Arising from Minutes of Executive Committee Meeting Held November 29, 1949

(Continued from August-September Issue)

G. Discipline Committee

The President read the minutes of the meeting of the Discipline Committee held May 5th, 1950.

Motion: "THAT the report of the Discipline Committee be adopted." Carried.

Dr. Johnson reported that the following is the proposed by-law concerning Disciplinary Powers which were forwarded to the solicitor asking his opinion whether it might be enacted in accordance with Section 25 of the Medical Act. No reply has been received as yet.

If any person registered, after due enquiry by the Council, is adjudged to have been NOT guilty of infamous or unprofessional conduct in any respect, or of professional incompetence, negligence or misconduct so gross as to disqualify such person from practising medicine, surgery or midwifery, council may adopt a resolution in one of the following forms, or in such other form as it may consider appropriate.

1. That, in the opinion of the Council, the complaint has not been established.

2. That, in the opinion of the Council, there has been no violation of the generally accepted principles of the professional conduct and that no action be taken.

3. That, in the opinion of the Council, the complaint is frivolous, and that the case be dismissed.

4. That, in the opinion of the Council, ... has committed an indiscretion and error in judgment, but that his conduct does not call for censure.

5. That, in the opinion of the Council ..... has violated the generally accepted rules of professional conduct, but that in consideration of the circumstances and in particular the apparent faults of other parties concerned, the case be dismissed.

6. That, in the opinion of the Council ..... has violated the generally accepted rules of professional conduct and that his conduct has been inimical to the best interests of the public and of the profession and that he be and hereby is censured.

7. That, in the opinion of the council, the conduct of ..... has been or is, with respect to ..... inimical to the best interests of the public and of the profession, and

(1) that he be informed of the finding of the Council and allowed until ..... to reconsider his position;

(2) that the registrar be instructed to report in due course upon his reply, if any;

(3) and that if, upon such further report, the council shall consider his reply unsatisfactory, or if no reply be received within the time specified, appropriate action may be taken forthwith.

8. That in the opinion of the Council, the conduct of ..... has been or is such that he is judged guilty of unbecoming or improper conduct, professional or otherwise; that the matter be reported forthwith to the Council in order that appropriate action may be taken. Without restricting the powers of the Council, such "appropriate" action may consist of the following penalties:

(a) censure;
(b) censure and the payment of the costs of the investigation;
(c) censure, fine and the costs of the investigation;
(d) suspension from the College of Physicians and Surgeons for any period not exceeding three years;
(e) fine and suspension from the College of Physicians and Surgeons for any period not to exceed three years, with or without the costs of the investigation;
(f) erasure of name from membership in the College of Physicians and Surgeons.

Dr. Wlliams suggested that provided legal approval is given, these proposals be included in the present Notice of Motion, otherwise it would require an extra six months.

Motion: "THAT if the legal opinion is favorable, the above outline of disciplinary powers be incorporated into the outline of by-laws of which notice of motion was given earlier." Carried.

H. Taxing Committee

No report.

5. Reports of Special Committees and Their Consideration

A. **Representatives to the Manitoba Medical Association Executive.**

Dr. Stewart advised there was nothing special to report from the meetings of the Manitoba Medical Executive.

B. **Trustees of the Gordon Bell Memorial Fund.**

The Registrar reported that no meeting of the Trustees had been held, and that no recommendation had been received.

C. **Representative to the Committee of Fifteen.**

No special report—refer to report of Legislation Committee.

D. **Representative to the Committee on Admissions.**

Dr. Williams presented the following report;

A meeting of the Student Selection Committee was called for and held on February 27th, 1950. Unfortunately your representative did not receive his notification of this meeting which was sent to the Medical College by mistake and only learned of the meeting afterward when asked why he was absent.

The meeting was covered in the report of your representative on the Senate. Considerable discussion took place but nothing was definitely settled.

A second meeting of the Committee of Selection together with the Board of Governors of the University was held at the University Board Room Broadway site, on March 31, 1950. Your representative was asked by the President to state the feeling of the C.P. & S. concerning Student Selection, and stressed the necessity of something beside academic standing to determine suitable applicants. I also cited the report of several medical deans and educators whom I discussed this question with in Chicago last year all of whom said "There is no formula that can replace personal interviews". Dean Bell of our own faculty stated he had recently discussed the problem with three eastern Canadian Medical College deans and they also find personal interviews necessary.

At this meeting we were each supplied with a typed copy of the Regulations Governing the Selection of Students for Admission to the Faculty of Medicine which is appended herewith.

Your representative stated, and other members of the committee also agreed, that this was the first time these regulations had been brought to our notice and that certainly last year's selection was on academic standing only.

Section (c) states "Selection shall be based on scholarship, intelligence, character, fitness and the respective claims of all qualified applicants to participate in the benefits of the course leading to the degree of Doctor of Medicine."

This provides the selection committee with several criteria of fitness in addition to academic standing which criteria cannot be assessed by examination marks only.

It was agreed by the meeting and heartily endorsed by the Board of Governors that some method of personal interview and appraisal should be instituted in future, but that it may be impossible to do so this year owing to lack of time before selection must be made.

It was suggested that on the panel of interviewers there might well be some business executives with experience in sizing up personnel. It was suggested that a type plan of interview and scoring from that plan would be advisable. It was suggested that where doubt existed the student might be directed by the dean's office to another interview with possibly a psychiatrist being included. The need of some record of the students high school and University junior years as to participation in extra curricular activities was stressed and spoken to at length.

Aptitude tests were discussed at length and generally regarded as contributing but little as the material in many of those available are applicable to U.S.A. and not Canadian students. They have some value but cannot replace interviews.

The Board of Governors were specifically asked if they would back up the Committee in making carefully considered selection of students by interview, and other means which selection might mean the rejection of some higher academic average students, and the acceptance instead of some of lower academic standing considered by the committee as more desirable. To this the Board of Governors gave their assurance of approval and support.

The unanimous feeling of this meeting was that the present system is unsatisfactory, and that the other factors mentioned in clause (c) above should have a greater influence, and that personal interviews of student applicants should be arranged before next year's selection is made.

Your representative reports real progress in which the C.P. & S. has taken the lead in clearing up this admittedly unsatisfactory situation.

Respectfully submited,

T. H. Williams, M.D., C.M.

The University of Manitoba—Regulations Governing the Selection of Students for Admission to the Faculty of Medicine.

In view of the fact that it is necessary to limit the number of students admitted to the first year in the Faculty of Medicine, the Board of Governors hereby establishes the following regulations to govern their selection:

Basis of Selection.

The basis of selection shall be as follows:

(a) The University does not undertake to accept all applicants who have fulfilled examination requirements.

(b) Preference shall be given to applicants resident in Manitoba, and to applicants who are graduates or undergraduates of the University.

(c) Selection shall be based on scholarship, intelligence, character, fitness, and the respective claims of all qualified applicants to participate in the benefits of the course leading to the degree of Doctor of Medicine.

(d) The selection shall be made without regard to the racial origin or religion of the applicant.

Committee of Selection.

The selection, from among the qualified applicants, of those admitted to the first year in the Faculty of Medicine shall, subject always to a right to appeal to the Board of Governors, be made by a committee, to be known as the "Committee of

Selection," which shall be composed of:

(a) The President of the University, who shall be chairman.
(b) The Dean of the Faculty of Medicine.
(c) The Professor of Medicine.
(d) The Professor of Surgery.
(e) A professor from one of the pre-clinical departments of the Faculty of Medicine.
(f) A practising physician nominated by the College of Physicians and Surgeons of Manitoba.
(g) The Dean of the Faculty of Arts and Science.
(h) One additional member of the staff of the Faculty of Arts and Science; and
(i) The Registrar of the University.

Motion: "THAT the report of the representative to the Committee on Admissions be adopted." Carried.

E. Representative to the Medical Council of Canada

No report.

Communication From Dr. Thos. McPherson, President, Canadian Medical Association, re Public Relations

The Registrar read the communication from Dr. McPherson which inquired what was the opinion of this Council re public relations, and whether anything active is being done to let the public know the opinions of organized medicine.

The Registrar presented the outline the C.M.A. has already undertaken.

There is a Public Relations Committee which has completed the production of a filmstrip "Careers in Canadian Medicine."

It was considered the Public Relations Officer should be a doctor, with intimate knowledge of the policies and activities of the C.M.A. and its Divisions. It was felt this was in the field of the General Secretary and that additional secretarial assistance should be obtained when required.

For professional assistance, arrangement has been entered into with "Public and Industrial Relations Limited" for a period of five months—February to June, 1950, on an experimental basis as public relations counsel.

They have been doing some research work and have employed a public relations data man.

They have issued a pamphlet "On Call," a public relations pamphlet which is distributed first to the profession before they go into the public field.

Dr. ..... suggested public relations were being well handled by the C.M.A. He said one of the major criticisms of the profession by the press is the matter of licensure of displaced persons. He wondered whether, through public relations, we should try to give the pertinent information re regulations to the press or the public in some way.

Dr. ..... asked whether it would be possible for the Registrar to give a dignified report to the papers giving a statement of the regulations concerning licensure. He did not think there would be anything undignified or unethical about such a report provided it was not distorted, and thought the profession was too silent as far as the public was concerned.

It was agreed that the matter of public relations be taken up by the Liaison Committee.

F. Representative to the University Senate

Dr. Walton stated he had attended all meetings of the Senate. The Senate deals with a number of matters not connected with this College. He said he was a member of two special committees of the Senate, the Basic Sciences Committee, and the Advisory Committee on Nursing Education.

In connection with the Advisory Committee on Nursing Education, Dr. Walton advised that during the war a school of nursing was created in the University of Manitoba providing training in Public Health and Instruction and Supervision. The school is on a temporary basis, and the Minister of Health decides year by year whether a grant will be made to carry on. During the past 3 or 4 years the course in Public Health was given but no course in Instruction and Supervision. There is a tremendous demand for specially trained nurses, and various organizations in the Province have gone on record asking the Department of Health to put the School of Nursing on a permanent basis. Dr. Walton suggested the College should do the same.

Motion: "THAT the report of the representative to the University Senate be adopted." Carried.

Motion: "THAT the Council of the College of Physicians and Surgeons of Manitoba urges the permanent establishment of a School of Nursing in the University of Manitoba, and that at least two courses be offered, one in Public Health and the other in Instruction and Supervision." Carried.

The Registrar was instructed to address this recommendation to the Minister of Health and Public Welfare.

G. Representatives to the Cancer Institute

For information the Registrar reported that the plan to establish Cancer Diagnostic Clinics had been referred to a Committee of Ten, five from the M.M.A. and five from the Medical Board of the Cancer Institute.

H. Representatives to the Liaison Committee

Dr. Best advised that the business of the Liaison Committee had been reported at the meeting of the Executive Committee, March 3, 1950, and had been discussed under No. 4 of this meeting.

Canadian Medical Protective Association

The Registrar advised that Dr. T. L. Fisher, Secretary-Treasurer of the Canadian Medical Protective Association, spoke at a meeting of the Winnipeg Medical Society and outlined 10 cases of threatened suit against Manitoba doctors. Dr. Fisher explained that where there is one or two

successful complaints which are taken through the courts and the decisions rendered against members of the profession, there follows immediately a number of threatened suits by people who feel they have a grievance.

It was suggested that a member of the Discipline Committee, C.P. & S. should be a provincial representative of the C.M.P.A. so that the College would be advised of the difficulties which members of the profession may find themselves, and that the representative to the Medical Council of Canada bring this question up and find out what information is requested by the Councils of other provinces and whether it would be advisable for the Manitoba College to request the C.M.P.A. to supply us with information concerning pending actions against Manitoba registrants. It was considered it would be a definite advantage to the Council if the Protective Association could see fit to notify the Registrar of any misdemeanor or action which is pending so the Discipline or Taxing Committee could study it and in a good many instances could help the member of the profession who is being threatened with suit.

I. Canadian Arthritis and Rheumatism Society

The Registrar reported an appeal for funds was lodged on the first of May but was seriously interfered with on account of the flood conditions in Manitoba.

6. Election of Officers and Standing Committees

Not applicable at this meeting.

7. Reading of Communications, Petitions, etc., to the Council

(a) Communication From C.P. & S., Alberta, re Interneship Year

A copy of letter addressed to the Medical Council of Canada by the Registrar, College of Physicians and Surgeons of Alberta, was presented, stating that a resolution was passed by the Council of the C.P. & S., Alberta, requesting the Medical Council of Canada to withold the certificates of the Medical Council of Canada, until such time as the applicant had submitted evidence of having completed one year's interneship.

Motion: "THAT the letter from the College of Physicians and Surgeons of Alberta be tabled." Carried.

(b) Communication From the Medical Council of Pakistan re Reciprocal Registration

A communication was presented from the Medical Council of Pakistan enclosing copy of letter under date November 18, 1948, which was never received. The communications advised that consequent upon the division of India and the establishment of the new Dominion of Pakistan, a separate Medical Council for the whole of Pakistan was constituted under the Indian Medical Council Act, 1933, as applicable to the new Dominion with the adaptations effected by the Pakistan (Adaptation of Existing Laws) Order, 1947. At the present time membership of the College of Physicians and Surgeons of the Province of Manitoba and the M.D. and M.D., Ch.M., qualifications of the University of Manitoba, if granted on or before the 31st October, 1937, are recognized by the Medical Council of Pakistan, and are considered as sufficient qualifications for registration on any of the Provincial Medical Register of Pakistan provided the C.P. & S. of Manitoba also have a similar provision in their Medical Act to accord the same status to holders of medical qualifications granted by teaching institutions in Pakistan and which are recognized by this Council, Viz. M.B., B.S. of the Punjab University. The Medical Council of Pakistan has found existing arrangements most inadequate and propose that in the event of the C.P. & S. of Manitoba agreeing to take similar action, their Council would take necessary steps to remove the **time bar** imposed against the qualifications granted in Manitoba which would in future be recognized in Pakistan unconditionally.

Dr. ..... suggested the Medical Council of Pakistan would be interested in reciprocal registration for the purpose of sending physicians over for postgraduate training similar to India.

Dr. ..... advised that there are universities in Pakistan not recognized by the General Medical Council, and there are universities recognized by the General Medical Council with chiefly British teachers. We should be careful not to give recognition to universities whose training is not of high standard.

The Registrar advised a similar request was received from India but no action had been taken to carry out reciprocal arrangements.

Dr. ..... said Pakistan was a very new country, and there were older countries members of the British Commonwealth of Nations with whom we had no reciprocity. He suggested the matter be deferred and the picture watched for a little while.

Motion: "THAT action re reciprocal arrangements with the Medical Council of Pakistan be deferred." Carried.

8. Inquiries

None.

9. Notices of Motion

Moved by Dr. T. H. Williams: "THAT the revised By-laws Rules and Regulations be accepted as printed, with power to make any minor changes which may be suggested."

By-laws, Rules and Regulations of the College of Physicians and Surgeons of Manitoba

The arrangement of these By-laws has been made to conform insofar as possible to the corre-

sponding sections of the Medical Act. For that reason the order is different from that of the previous copy.

1. Election By-law

A. All elections for members of the Council of the said College of Physicians and Surgeons of Manitoba shall be by ballot.

B. Any duly registered practitioner, that is, any member of The College of Physicians and Surgeons of Manitoba, who is not in arrears on his annual fees, or any part thereof on June 30th of the current year of election, or any honourary Life Member, shall be entitled to nominate and vote at elections for members of the said Council, and he, or any honourary Life Member, shall also be eligible for election as a member thereof for the Electoral District in which he is a resident at the date of the election.

C. The Registrar of The College of Physicians and Surgeons of Manitoba shall be the Returning Officer, and shall send by mail to the last known post office address, or otherwise deliver, to every duly registered practitioner entitled to vote at said election, the forms as set out under the amended Election By-law adopted April Twenty-seventh, 1945, and as subsequently amended October Eighteenth, 1944.

D. The Registrar shall (in 1934 or any election) not later than August 1st, mail to each member of the College:

(a) A statement as to the constituency in which such member resides.

(b) A list of the members of the College eligible for election to the Council, in the constituency in which such member resides.

(c) A printed form to be known as the Nomination Form, which shall provide for:

i. The name of the constituency with name of present representative.

ii. The name of the member being nominated for election to the Council.

iii. Name of member of such constituency as nominator.

iv. Notice that such Nomination Form must be returned to the Registrar not later than August 31st, in order to provide for nomination.

E. In each constituency such members as return (or have returned for them) to the Registrar, not later than August 31st a Nomination Form properly filled out and signed by one member of the College (Nominator), eligible to vote in the same constituency as that in which the nominee resides, shall be declared to be duly nominated for election to the Council.

F. In the event of only one member (or only a sufficient number of members to fill the vacancies existing) being properly nominated for election, such member (or members) shall be declared duly elected to the Council.

G. In the event of no member (or an insufficient number of members to properly fill the vacancies existing) being nominated from any given constituency or constituencies, the Council, or its Executive Committee, shall be empowered before September 15th, to name not less than two members (nor more than double the number of members of the vacancies existing) from the constituency, or constituencies, who shall thereby be declared to be duly nominated for election to the Council.

H. The Registrar shall not later than September 15th mail to each member of the College, eligible to vote at election, a return addressed envelope directed to the Registrar, an envelope to contain the Voting Papers, which shall not be opened by anyone except the scrutineers, and a Ballot Form, which shall provide for:

(a) The name of the constituency.

(b) The names of the members nominated for election to the Council from such constituency.

(c) Such proper space as may allow the member voting to indicate his choice of nominee, or nominees, to be elected.

(d) Notice that such ballot must be returned to the Registrar not later than September 30th, in order to be registered for the election.

(e) On October 1st, or the first legal non-holiday thereafter, the ballots shall be counted by the duly appointed Scrutineers, who shall then declare to the Registrar, and through him to the Council, the names of the member or members from each constituency duly elected to the Council for the ensuing year.

I. Following the mailing or delivering of either Nomination or Voting Papers, no subsequent or altered Nomination or Voting Papers shall be mailed or delivered, except in cases of error on the part of the Returning Officer.

J. In the event of a tie vote being cast in any constituency, the Returning Officer shall be empowered to cast a necessary ballot.

K. Any By-election shall be conducted in the same manner as a general election in the constituency in which a vacancy occurs, at a date appointed by the Council or by the Executive Committee.

L. A sealed envelope containing the voting paper may be returned by letter or delivered to the Registrar personally, and in such latter case the voter shall be entitled to receive a written acknowledgement of the same.

M. The envelope containing the Voting Paper previously certified correct by the Registrar shall then be opened by the scrutineers who shall proceed to count the votes, and report to the Registrar who shall declare the result of the election.

N. The scrutineers shall immediately after counting the ballots seal up the same and present

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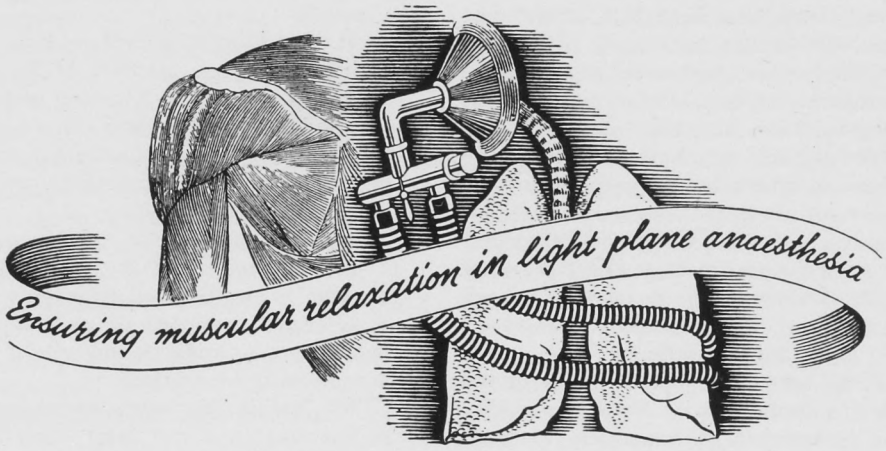

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to the Registrar, who shall hold them subject to the order of the Council.

O. When the result of the election has been ascertained, the Registrar shall forthwith notify the members of the new Council, severally, of their election, and the date of the first meeting of the newly elected Council which shall be held in Winnipeg, at the place to be specified by the Registrar, in the notice calling the meeting of the Council, on the Third Wednesday of October, at the hour of Eight o'clock p.m., or at what hour the Executive Committee may decide, for the purpose of electing a President, and other officers and selecting one representative to the Senate of the University of Manitoba pursuant to The Medical Act (Section 75) and for the transaction of other business deemed proper.

P. Each newly elected Council shall appoint two scrutineers, and two alternates, who may act for the term of such Council. Should either or both of the two duly appointed scrutineers be unable or fail to act, the Registrar may request either or both alternates to act.

Officers, Duties and Rules of Procedure

2. The Council shall annually elect from amongst themselves, by ballot or vote, a President and Vice-President, and from the members of the College, a Registrar, a Treasurer, and such other officers as may from time to time be necessary, and who shall hold office during the pleasure of Council, and until their successors are appointed.

3. The President, or Vice-President, or elected Chairman, in the absence of either officer, shall preside at all meetings; call the Council to order at the hour appointed, and cause the Minutes of the preceding meeting to be read, confirmed, and signed; then proceed with the regular business.

4. When the President or other presiding officer is called on to decide a point of order or practice, he shall state the rule applicable to the case, without argument or comment, subject to an appeal to the Council.

5. The President, or other presiding officer, shall declare all votes, but if any member demand it, the President or other presiding officer, shall require the members voting in the affirmative and negative respectively to stand until they are counted and recorded, and he shall then declare the result. Every member present shall vote unless excused by the Council. The President shall have a casting vote only.

6. When any member is about to speak in debate he shall rise in his place and address the presiding officer, confining himself to the question under debate, and avoiding personalities.

7. When two or more members rise at the same time the President, or other presiding oficer, shall name the member who is first to speak.

8. No member while speaking shall be interrupted by another except upon a point of order, or for the purpose of explanation. The member so rising shall confine himself strictly to the point of order or the explanation.

9. If any member, in speaking or otherwise, transgress the rules, the President, or other presiding officer, shall, or any member of the Council may, call him to order, in which case the member so called shall immediately sit down, unless permitted to explain, and the Council, if appealed to, shall decide upon the point of order, but without debate.

10. No member shall speak more than once on any motion or resolution, unless permitted by the presiding officer, except the proposer, who shall be permitted to reply. No member shall speak longer at one time than a quarter of an hour on the same question without the leave of the Council.

11. Any member of the Council may require the question under discussion to be read at any time of the debate, but not so as to interrupt a speaker.

12. No member shall speak to any question after the same has been put to vote by the President, or other presiding officer.

13. At the request of two members the yeas and nays may be taken.

14. A motion must be put in writing and seconded before it is stated by the President, or other presiding officer, and then shall be disposed of only by a vote of the Council, unless the mover, by permission of the Council, withdraw it.

15. When a question is under debate no motion shall be received unless:

(a) To adjourn.
(b) The previous question.
(c) To postpone.
(d) To lay on the table.
(e) To amend.

The Chairman shall put the previous question in this form:

"Shall the main question be now put?" and its adoption shall end all debate, and bring the Council to vote upon the main question.

16. The Chairman shall consider a motion to adjourn as always in order, and that motion and the motion to lay on the table shall be decided without debate.

17. Any member who has made a motion may withdraw the motion by leave of the Council and the consent of the seconder.

18. **Duties of the Registrar.**

The Registrar shall properly and correctly keep "The Manitoba Medical Register," investigate the qualifications of all persons applying for registration, and perform all other duties required of him by the Medical Act.

He shall attend all meetings of the Council, and record minutes of proceedings of such meetings.

He shall give notice to each member of all meetings of the Council at least two weeks before such meeting, specifying the nature of the business to be transacted.

He shall conduct all official correspondence.

He shall receive and submit all documents for the Council or Standing Committees, take charge of all reports, correspondence, accounts, and other documents, and file the same. He shall certify all accounts for payment.

He shall collect all moneys due the College.

The Council may or shall order the Registrar to be properly bonded.

19. **Duties of the Treasurer.**

The Treasurer shall receive and be the custodian of all moneys of the College and shall deposit all moneys received by him in a chartered bank to be selected by the Council unless otherwise ordered by the Council. He shall look after on behalf of the Council all investments of moneys. He shall not pay out any moneys except on the British institutions.
order or certificate of the President or Vice-President and Registrar. He shall keep a detailed statement of receipts and expenditures and shall submit annually to the Council a balance sheet setting forth the same fully, and also a statement setting forth all the assets and liabilities of the College.

All cheques must be signed by the Treasurer and Registrar. In the absence of either, the cheques may be countersigned by the President or Vice-President of the Council. (May 12, 1936). The Treasurer shall be properly bonded.

20. **Committees.**

The Standing Committees shall be:

(a) Executive pursuant to the provisions of the Medical Act.
(b) Registration.
(c) Education.
(d) Finance.
(e) Legislation.
(f) Library.
(g) Committee pursuant to sections 42 to 57 inclusive of the Medical Act, to be known as Discipline Committee.
(h) Taxing Medical Fees.

The First named member of any of the above committees shall act as Chairman. The President, Vice-President and Registrar to be ex-officio members of all committees.

A majority of any committee shall constitute a quorum. The Council may at any time appoint a special committee to deal with any matter referred to it by the Council.

21. When the Council shall determine to go into Committee of the Whole, the President or other presiding officer, shall name the member who shall take the chair.

22. The rules of the Council shall be observed in Committee of the Whole, except the rules respecting the yeas and nays, and limiting the number of times of speaking, and no motion for the previous question or for an adjournment can be received, but a member may at any time move that the Chairman leave the chair, or report progress, or ask leave to sit again; and all original motions shall be put in the order in which they are proposed, and shall not require to be seconded.

23. On motion in Committee to rise and report the question shall be decided without debate.

24. Every member who shall introduce a petition or motion upon any subject which is to be referred to a special committee shall be one of the committee without being named by the Council.

25. Any member of the Council may be elected an officer, or may be placed on a committee notwithstanding the absence of such member at the time of his being named to such committee.

26. A committee appointed to report on any subject referred to it by the Council, shall report a statement of the facts, and also its opinions thereon in writing; and it shall be the duty of the Chairman, or acting Chairman, to sign and present the report.

27. All petitions or communications on any subject within the scope of a Standing Committee shall, on presentation, be referred by the Chairman or presiding officer to the proper committee without any motion; but it shall be competent for the Council by a majority vote to enter on immediate consideration thereof.

Duties of Committees

28. **Executive Committee.**

The Executive Committee shall consist of Five Members of the Council, to be elected each year at the regular Annual Meeting. It is appointed in pursuance and for the purposes of Sections 18 and 19 of the Medical Act, and shall have all the powers provided by the Medical Act.

29. **Committee on Registration.**

The Committee on Registration, which shall consist of Three Members, of the Council, to be elected each year at the regular Annual Meeting, shall consult with and advise the Registrar as to the qualifications of any application for licence.

All applications for registration should be made in writing accompanied by a tabling of credentials, and the Registration Committee deal with them and make a record of its decision and its reasons for the same, with the exception of graduates of the University of Manitoba, whose applications may be accepted without calling a meeting of the Registration Committee.

29a. **Student Registration.**

Every student resident in Manitoba, before or on entering his or her first year in the study of medicine in any College, shall register as a medical student with the College of Physicians and Surgeons of Manitoba.

The purpose of such registration is to satisfy this Council that the student's primary and pre-medical education meets the established standard, thereby avoiding complications when certificates of any form may be required.

29b. **Enabling Certificate.**

An applicant from any University outside of Manitoba who desires an Enabling Certificate for the purpose of taking the L.M.C.C. examinations must send to the Registrar in addition to his degree or diploma, detailed information as follows:

(a) As to his matriculation, giving the name and address of the institution in which he was examined, the subjects, and the extent of each required.

(b) As to his medical course, the name of the College or University from which he graduated and a statement of its requirements for graduation.

(c) In addition each applicant must produce evidence, satisfactory to the Council, of his identity, good character and professional conduct, twelve months interneship (Basic Sciences Certificate of Credit), and birth certificate and/or naturalization papers. On receipt of this information the Registrar or Registration Committee may decide as to the eligibility of the applicant to write for licence. Should the documentary evidence submitted fail to satisfy the Registration Committee, the applicant might be asked to pass the examinations of the fourth year, Faculty of Medicine, University of Manitoba, and to serve one year interneship in an approved hospital.

29c. **Certificate of Registration.**

All applicants desirous of being placed on the register must pay the registration fee provided ($100.00), and produce to the Registrar:

(a) A diploma of Graduation in Medicine from the University of Manitoba, or a Certificate from the Senate of the University under Section 75 of the Medical Act, or

(b) A certificate of registration on the Canadian Medical Register (L.M.C.C.), or

(c) A certificate of registration (permanent) on the Register of the General Medical Council of the United Kingdom (as distinct from the Commonwealth and Foreign Lists), when presented by British subjects who obtained their training in

No applicant from any Province of Canada will be eligible unless British registration has been secured by examination, or unless he was licensed in a Province of Canada prior to 1925 and has been in active ethical practice and/or graduate study continuously since 1925, or

(d) A certificate of registration with the Medical Board of New South Wales, Australia, when presented by graduates of the University of Sydney.

(e) A certificate of registration with the Medical Council of New Zealand, when presented by graduates of the University of New Zealand.

In addition, each applicant must produce evidence, satisfactory to the Council, of his identity, good character and professional conduct, twelve months' interneship (Basic Sciences Certificate of Credit), birth certificate and/or naturalization papers, and that the certificate which he presents is in good standing.

29d. **Certificate of Licence.**

A licence for persons who possess the necessary qualifications for registration and who are employed in special occupations is available under conditions defined in the Medical Act (Sec. 33A) for:

(a) Medical Officers of the permanent defence forces.

(b) Full time employees of the Canadian Red Cross Society.

(c) Graduate internes employed full time in a hospital.

(d) Full time employees in federal or provincial government service for initial twelve months.

30. **Committee on Education.**

The Committee on Education, which shall consist of Three Members of the Council, to be elected each year at the regular Annual Meeting, shall have in charge any changes which may be deemed necessary or advisable in the curriculum governing the requirements for a licence to practise in this province.

31. **Committee on Finance.**

The Committee on Finance, which shall consist of Three Members of the Council, to be elected each year at the regular Annual Meeting, shall have the supervision of the fiscal concerns of the Council, and report the conditions of the various funds.

It shall prepare a detailed statement of the necessary estimates of money required by the Council for the year, and report the same for the consideration and action of the Council.

It shall examine all accounts presented to the Council and consider and report on all matters referred to it, but it shall pass no bills or accounts unless countersigned by the Chairman of the committee having such bills or accounts in charge.

When examining the safety deposit box, two signatures be required, one to be that of the Treasurer and the other to be a member of the Finance Committee, and in the event of such member of the Finance Committee being unavailable, the signature of one of the Officers located in Winnipeg be required, and that in signing the book at

the Trust Company vault, or bank deposit vault, the position held by the signatory must also be specified.

32. **Committee on Legislation.**

The Committee on Legislation, which shall consist of Five Members of the Council, to be elected each year at the regular Annual Meeting, shall have charge of and shall promote any proposed changes in the Medical Act and all other matters requiring legislative attention.

33. **Library Committee.**

The Library Committee shall consist of One Member of the Council, to be elected each year at the regular Annual Meeting. He shall be the Council's representative on the University of Manitoba Faculty of Medicine Library Committee. He shall recommend to the Council from time to time the purchase of new books and periodicals, and all recommendations in regard to expenditure of moneys for the library shall be made by him.

34. **Discipline Committee.**

The Discipline Committee shall consist of Five Members of the Council, to be elected each year at the regular Annual Meeting. It is appointed in pursuance and for the purpose of sections 42 to 59 inclusive of the Medical Act and shall have all the powers provided by the Medical Act.

35. **Committee on Taxing Medical Fees.**

The Taxing Committee shall consist of Three Members of the Council, to be elected each year at the regular Annual Meeting. It shall adjudicate on all such complaints concerning medical fees as may be referred to it by the Executive Committee.

36. **Fiscal Year.**

The fiscal year of the College of Physicians and Surgeons shall begin on the first day of October in each year.

37. **Meetings.**

The Annual Meeting of the Council shall take place on the Third Wednesday of October of each year, not less than seven members to constitute a quorum, at which meeting the officers for the ensuing year shall be elected.

38. A committee shall be appointed by the Council to strike Standing Committees of the Council for the year.

39a. Special meetings of the Council may be called at the discretion of the Executive Committee by the President, or in his absence the Vice-President or Registrar, and may be requested by a written requisition stating the special business, addressed to the President (or Registrar) and signed by at least three members of the Council.

39b. Notice of all meetings of the Council shall be sent to each member of the Council two weeks before such meeting, specifying the day, date, hour and place of meeting. An agenda should be enclosed.

39c. **Order of Business at each Annual Meeting.**

(1) Calling names of members and marking them as present or absent.

(2) Reading of the Minutes and their approval.

(3) Reports of Officers and their consideration.

(4) Reports of Standing Committees and their consideration.

(5) Reports of Special Committees and their consideration.

(6) Election of Officers and Standing Committees.

Election of Special Committees.

Appointment of Auditors and Scrutineers (two from members of Council, or two duly registered members of the College in good standing).

(7) Reading of Communications, Petitions, etc., to the Council.

(8) Inquiries.

(9) Notices of Motion.

(10) Motions of which notice has been given at a previous meeting.

(11) Unfinished business from previous meetings.

(12) Miscellaneous and new business.

At all other than Annual Meetings of the Council the order of business shall be the same, except Number Six which may be deleted. No variation in the foregoing order of business shall be permitted at any meeting unless agreed to by a majority of members present.

40. **Hour and Place of Meeting.**

All regular meetings of the Council shall be held at such place as may by resolution of the Council from time to time be determined, and at such hour as the Executive Committee may decide.

Allowance to Members

41a. There shall be paid to each member of Council for attendance at Council meetings a fee not exceeding $25.00 per day, with to members outside of Greater Winnipeg an additional like amount for each day necessarily required for travel to and from Winnipeg, and travel expenses at the rate of Ten Cents per mile both ways.

41b. There shall be paid to each member of Council in the City of Winnipeg or its suburbs for attendance at any committee meeting the sum of $5.00, and to those outside Winnipeg and suburbs the sum of $10.00 and mileage at Ten Cents per mile both ways. The same amounts shall be paid to members outside the Council when representative on any committee.

42. **Salaries.**

The salary of the Registrar shall be a sum per annum determined at the Annual Meeting of the Council.

The salary of the Treasurer shall be a sum per annum determined at the Annual Meeting of the Council.

43. **Fees.**

The fee for student registration shall be One Dollar ($1.00).

The fee for Enabling Certificate to write the examinations of the Medical Council of Canada shall be Five Dollars ($5.00).

The fee for enrollment under Clause Eighteen of Canada Medical Act shall be Five Dollars ($5.00).

The fee for the General Medical Council certificate shall be Five Dollars ($5.00).

The fee for registration shall be One Hundred Dollars ($100.00), and each additional qualification which a member may obtain shall be inserted in the Register at his request.

The Annual fee shall be Five Dollars ($5.00), due January First of each year.

The fee for Certificate of Licence shall be:

(a) Medical Officers of the permanent defence forces, Ten Dollars ($10.00).

(b) Full time employees of the Canadian Red Cross Society, Ten Dollars ($10.00).

(c) Graduate internes employed full time in a hospital, Five Dollars ($5.00), or Ten Dollars ($10.00), according as salary received is under or over $100.00 per month.

(d) Full time employees in federal or provincial government service, Ten Dollars ($10.00).

44. **Waiver of Annual Fees.**

When a member of the College of Physicians and Surgeons of Manitoba becomes Sixty-five (65) years of age, and has practised Thirty (30) consecutive years in the Province of Manitoba, and is in good standing, that his name be enrolled as a Life Member of the College.

45. **By-law of the Gordon Bell Memorial.**

WHEREAS the College of Physicians and Surgeons of Manitoba has decided that there should be set aside out of its funds the sum of $20,000.00 to encourage interest in, and knowledge of, medical and surgical science and practice and for purposes deemed to be to the general advantage of the medical profession and the members of the College and to encourage medical research work in Manitoba, and for other purposes in accordance with the Medical Act, being Chapter 126 of the Revised Statutes of Manitoba, 1913, and amendments thereto, and desires that the said fund shall perpetuate the memory of the late Dr. Gordon Bell, and be known as the Gordon Bell Memorial in view of the distinguished service rendered to the members of the College and to the medical profession generally, and in the advancement of medical and surgical science and practice, rendered by the late Dr. Gordon Bell, for many years in Manitoba.

AND WHEREAS it is considered advisable and expedient that the said fund should be so established and that trustees should be appointed thereof and such fund paid over to them on the terms and conditions set forth in the trust deed hereto copied and marked Schedule "A."

BE IT THEREFORE ENACTED and it is hereby enacted by the College of Physicians and Surgeons of Manitoba that a trust fund of $20,000.00 be established and be known as "The Gordon Bell Memorial" and that the said fund be administered as set forth in the trust deed copied hereunder and marked Schedule "A," and that the President and Treasurer be, and are, hereby authorized to execute the said trust deed on behalf of the College under corporate seal thereof.

46. **Amendments.**

No amendments or additions to any of the foregoing By-laws shall be made unless due notice setting forth the proposed amendments or additions shall have been given at a meeting previous to that at which the same comes up for discussion, and all resolutions of the Council inconsistent with the above By-laws are hereby repealed except as outlined under the powers of the Executive Committee.

10. Motions of Which Notice Has Been Given at a Previous Meeting

None.

11. Unfinished Business

None.

12. Miscellaneous and New Business

(a) **Amount to be paid to Council Members for attendance at this meeting.**

Motion: "THAT the amounts paid to members of Council for attendance at this meeting be the same as for the meeting in October, with the amounts for new members to be computed at the same rates." Carried.

(b) **Payment of Janitor.**

Motion: "THAT the amount paid to the janitor for his services be Five Dollars ($5.00) plus the costs of refreshments." Carried.

(c) **Re Waiver of Fees for Dr. S. J. Johanneson and Dr. F. Sedziak.**

The Registrar advised that both Dr. Johanneson and Dr. Sedziak had been ill and were not able to carry on their practices. They are not eligible for Life Membership until 1952.

Motion: "THAT the annual fees of Dr. S. J. Johanneson and Dr. F. Sedziak for this and subsequent years be waived, including arrears." **Carried.**

(d) **Reports From Narcotic Division.**

The Registrar reported he received from time to time confidential reports from the Narcotic Division and other Registrars concerning various Manitoba registrants. He inquired whether these reports should be handed to the Discipline Committee when they are received.

It was agreed that if the suggested amendments go through making provision for fines and sus-

pension rather than erasure, communications of this nature should be handed to the Discipline Committee as soon as received.

(e) **Communication from Dean, Faculty of Medicine, University of Manitoba, enclosing copy of letter from Secretary, Michigan State Board of Registration in Medicine, and his reply.**

A communication from the Secretary of the Michigan State Board to Dr. L. G. Bell was presented, inquiring whether the University of Manitoba accepted applicants who are residents of the State of Michigan and who meet the academic requirements of the University, and requesting advice or recommendations to help consummate the plan of reciprocal licensure between the State of Michigan and the Dominion of Canada. Dr. Bell passed this on for reply by the C.P. & S.

The Registrar reported that the C.P. & S. already accepts graduates of all Class A medical schools in the United States to write the examinations of the Medical Council of Canada, provided they meet the requirements.

Adjournment.

Registration Committee

June 2, 1950.

Enabling Certificates Granted

Ta-Hui (David) Tien, M.B., Cheeloo U., 1944.

Shan-Yah Gin, M.D., Woman's Christian Medical College, 1931; D.C.H., R.C.P.S., Lond., 1948.

Hio-Wen Chien, M.D., l'Aurore U., 1944.

Certificates of Registration Approved

Jeremiah Reidy, M.B., Ch.B., National U., Ireland, 1933; D.P.H., National U., Ireland, 1948; L.M., Coombe Lying-In Hospital, Dublin, 1948; D.C.H., R.C.P.S., Ireland, 1949.

John Brian Chetwynd, L.R.C.P., Edin., 1943; L.R.C.S., Edin., 1943; L.R.F.P.S., Glasg., 1943; D.M.R.D., R.C.P.S., Eng., 1949.

Russell Alexander Gill, M.R.C.S., Eng., 1941; L.R.C.P., Lond., 1941; M.B., B.S., U. Lond., 1942; F.R.C.S., Eng., 1945.

Certificate of Registration Granted

Kathleen Adair Elliott, M.B., B.S., U. Durham, 1942; M.R.C.S., Eng., 1946; L.R.C.P., Lond., 1946.

Certificate of Licence Granted

Brian Busby Beeson, M.B., Ch.B., U. Bristol, 1949; M.R.C.S., Eng., 1950; L.R.C.P., Lond., 1950.

Considerable discussion concerning unlicensed physicians in the Province ensued.

Registration Committee, July 26th, 1950

Student Registration Confirmed

Clifford Edward Bulman Abbott, 2nd year, University of Ottawa.

Enabling Certificates Granted

Chih Huan Ling, M.D., Peking Union Medical College, 1926.

Ji-Toong Ling, M.D., St. John's U., Shanghai, 1942.

Serge Gregory Ross, M.D., U. Kharkov, 1921.

Hao Yao, M.D., St. John's U., Shanghai, 1948.

Enabling Certificate Deferred

Chi Kong Liu, M.D., National Central U., Nanking, 1947.

Certificates of Registration Confirmed

Joen Tche Lou, M.D., l'Aurore U., 1933; L.M.C.C., 1950.

Alan Cresswell Parkin, B.A. (Hons), U. Man., 1945; M.D., U. Tor., 1949; L.M.C.C., 1949.

James Roderick McDougall, B.Sc., U. Man., 1944; M.D., Laval U., 1949; L.M.C.C., 1950.

Lloyd Cleveland Bartlett, M.D., U. Western Ont., 1941; L.M.C.C., 1941.

Patrick Joseph Gouthro, B.A., St. Francis Xavier U., 1940; M.D., C.M., McGill U., 1947; L.M.C.C., 1948.

Donald Thomas Smylie, M.D., C.M., Queen's U., 1949; L.M.C.C., 1949.

Charles John Alexander, B.Sc., U.N.B., 1945; M.D., C.M., Dalh. U., 1950; L.M.C.C., 1950.

John Fyfe Macdonald, B.Sc., McGill U., 1942; M.D., C.M., McGill U., 1949; L.M.C.C., 1950.

John Martin Ryan, B.Sc., St. Francis Xavier U., 1945; M.D., C.M., Dalh. U., 1950; L.M.C.C., 1950.

Stanley Edward Rybak, B.Sc., U. Man., 1943; M.D., Laval U., 1948; L.M.C.C., 1948.

Mary Elizabeth Parkin, M.D., U. Tor., 1949; L.M.C.C., 1949.

Certificates of Registration Granted

Jeffrey Emmanuel Morris, M.B., Ch.B., Victoria U. of Manchester, 1945; M.D., U. Rochester, 1948; M.R.C.P., Lond., 1948.

Bjorn Jonsson, M.D., U. Iceland, 1947; L.M.C.C., 1950.

Chia-li (Kelly) Chu, B.Sc., Yenching U., 1937; M.D., Peiping Union Medical College, 1942; L.M.C.C., 1950.

Certificate of Licence Confirmed

Ellis Neal East, B.Sc., U. Alta., 1938; M.D., U. Alta., 1938; L.M.C.C., 1938.

Temporary Registration for Locum Tenens

The Registrar advised that he had several requests from recent graduates for temporary licences to do Locum Tenens. Some had temporary licences as hospital internes, and others were undecided as to where they were going to practise. It was necessary to advise them there was no provision in the Medical Act for temporary licences for Locum Tenens, and that the licences issued to hospital internes would not cover them outside of the hospital.

Motion: "THAT the Registration Committee recommend that the Council review the possibility of amending the by-laws to deal with matters concerning the licensing of qualified physicians for locum tenens." Carried.

The Committee were of the opinion that the fee for such a licence should be $10.00 (plus the

annual fee) and the licence would be valid for a period of three months, and not renewable. The Registrar was requested to get legal opinion from the College solicitor.

Since the last meeting of the Registration Committee, letters were sent to several unlicensed physicians in the province.

Registration Committee, Sept. 11th, 1950

Student Registration Confirmed

Clayton Ralph Ridgway, 1st year, University of Saskatchewan.

William Edward Abbott, 2nd year, University of Ottawa.

Stanley John Robbie, 2nd year, University of Ottawa.

Student Registration Granted

Pearl M. Driemen, 2nd year, University of Ottawa.

Leo Edward Joseph Desautels, 1st year, University of Ottawa.

Enabling Certificates Granted

Edward Harry Gee Hon, M.D., C.M.E., 1950.

Harry Charles Nelson, Jr., M.D., C.M.E., 1944; D. N. B., 1944.

Ethel Read Nelson, B.A., Pacific Union College, 1946; M.D., C.M.E., 1948; D.N.B., 1948.

Roger Theodore Nelson, B.S., La Sierra College, 1944; M.D., C.M.E., 1945; D.N.B., 1945.

Edward Huan Shu Chia, M.D., Cheeloo U., 1942.

Luke Shu-Ling Tsai, M.D., St. John's U., Shanghai, 1942.

Enabling Certificate Deferred

Chi Kong Liu, M.D., National Central U., Nanking, 1947.

Certificates of Registration Confirmed

John Stolar, M.D., Catholic U. of Louvain, 1939; L.M.C.C., 1950.

Galen Homer Coffin, B.Sc., Walla Walla College, 1943; M.D., C.M.E., 1949; D.N.B., 1949; L.M.C.C., 1950.

Rene John Fassina, M.D., C.M., Queen's U., 1941; L.M.C.C., 1941; M.R.C.P., Edin., 1950.

Certificates of Registration Granted

George Hector Levien, M.B., Ch.B., U.N.Z., 1939; F.R.C.S., Eng., 1948; D.O.M.S., Lond., 1948.

Marcus Marlborough, B.Sc., U. Glasg., 1943; M.B., Ch.B., U. Glasg., 1943; D.M.R.T., R.C.P. & S., Lond., 1949.

Burton Everett Ammundsen, M.D., C.M.E., 1949; L.M.C.C., 1950.

BOOK REVIEW

Reginal Dermatological Diagnosis—A Practical System of Dermatology for the Non-specialist; Erwin Epstein. 328 pages, 148 illustrations. Published by Macmillan Company of Canada. Price $7.20.

In his Preface the author writes, "There is one characteristic of skin diseases that is remarkably constant and easily determined—that is, the location of the eruption. For instance, only certain dermatoses occur on the elbows. Furthermore, an eruption that characteristically affects the elbows, such as psoriasis, does so in a very large percentage of the cases. Therefore, if an examining physician notes an eruption on the elbows, he knows that there are only certain conditions to consider. With such a simple fact as a starting point, he can use it as a firm foundation stone on which to build a solid, accurate diagnosis."

The book is an elaboration of this idea. Each region from scalp to toenails is considered seriatim. The disorders of each region are set down in order of frequency and the space given to each depends upon the importance of the condition. At the end of each chapter is a table which lists the more important dermatoses of the region and the more important features of each. Altogether the book is a very helpful and practical vade mecum. The illustrations have been selected from large personal collections and are therefore especially helpful. It is a book written to help the man in general practice to recognize the lesions he sees and to treat them more satisfactorily.

Radiological Meeting

Announcement is made by Dr. Warren W. Furey, M.D., of Chicago, president of the Radiological Society of North America, that the 36th Annual Meeting of the Society will be held in Chicago, December 10 through the 15th.

Headquarters for the meeting will be the Palmer House in which all scientific and technical sessions will be held. Scientific exhibits are also to be displayed in the hotel.

More than 60 papers as well as refresher courses feature the convention programme, according to Dr. Furey.

Dr. Wendel G. Scott, of St. Louis, Missouri, will present the annual Carmen Lecture. All members of the medical profession are welcome and invited, says Dr. Furey.

New Wyeth President

Gordon Gray, Walkerville, Ont., is the new president of John Wyeth & Brother (Canada) Ltd., manufacturers of pharmaceuticals. Mr. Gray has been with the firm he now heads since 1932 and has been successively credit manager, office manager, acting general manager, and vice-president and general manager. Announcement of his election was made by H. S. Howard, president of Wyeth Inc., Philadelphia. Mr. Gray will make his headquarters in Walkerville, Ont.

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